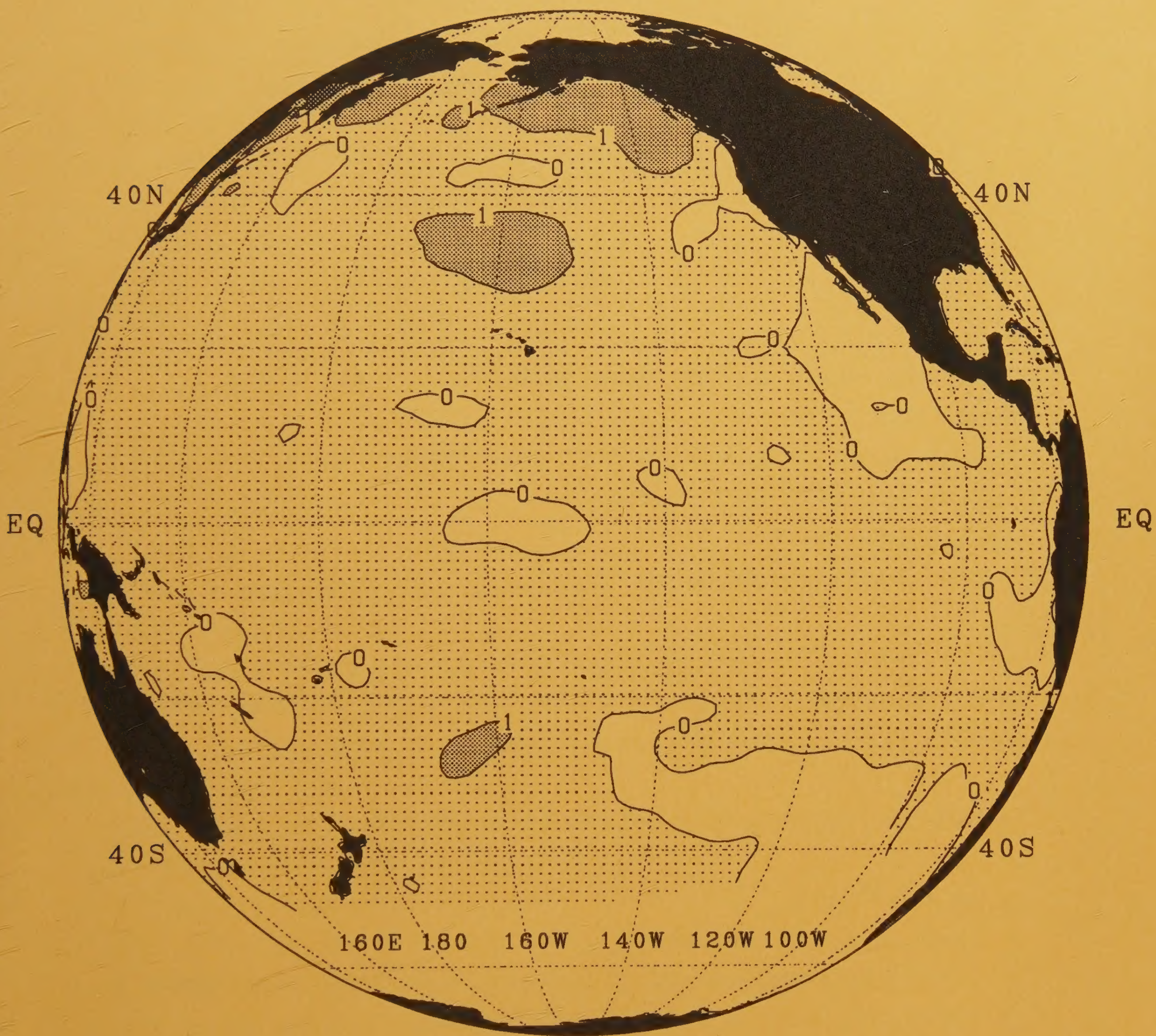
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気象庁海洋月報

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Monthly Ocean Report
August 2005 (No. 152)



Global Environment and Marine Department
Japan Meteorological Agency
気象庁 地球環境・海洋部

平成17年8月

気象庁海洋月報は、気象庁 地球環境・海洋部 海洋気象情報室で作成しています。
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Monthly Ocean Report is prepared by the Office of Marine Prediction, Global Environment and Marine Department, Japan Meteorological Agency.

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表紙は、2005 年 8 月の太平洋の月平均海面水温偏差図です。
陰影部は、平年より高温の海域を示しています。

The figure on the front cover shows the monthly mean SST anomalies for August 2005 in the Pacific Ocean.
Areas of positive anomalies are shaded.

目　次

* MGDSST (Merged satellite and *in-situ* data Global Daily SST)を使用している。
** 従来と同様の、現場観測による海面水温をもとにした解析値を使用している。

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* Based on MGDSST (Merged satellite and *in-situ* data Global Daily SST).

** Based on the traditional analysis using *in-situ* SSTs.

海況の特徴（２００５年８月）

日本近海の海況

海面水温は、全般に平年より0.5℃以上高く、オホーツク海、日本海、北海道の東から房総半島沖、および28° N、132° E付近の海域で平年より1℃以上高かった（第４図）。

黒潮は、紀伊半島から東海沖を離岸して流れ、上旬は32° N、138.5° Eまで南下した後、八丈島の南を通過し、141° E付近を北上していた。中旬は、蛇行部が東に移動し、八丈島の南の32° N付近を流れた後、141° E付近を北上していた。下旬は33° Nに沿って東に流れ、八丈島付近を通過した後、北東に流れていた（第９図）。

太平洋の海況

太平洋赤道域の海面水温は、160° W付近と南米沿岸を除いて平年より高く、160° Eから175° E にかけてと、130° W付近および120° W付近では平年より0.5℃以上高かった。

北太平洋の海面水温は、35° Nに沿った170° Wから150° Wにかけてと、ベーリング海西部、およびアラスカ湾では平年より 1℃以上高かった。一方、45° N、165° E 付近とカリフォルニア半島沖では-0.5℃を超える負偏差が見られた（第１７図）。

Highlights August 2005

Seas adjacent to Japan

SSTs were generally more than 0.5℃ above normal. Positive SST anomalies exceeding +1℃ were found in the Sea of Okhotsk, the Japan Sea, from east of Hokkaido to off the Boso Peninsula and around 28°N, 132°E (Fig. 4).

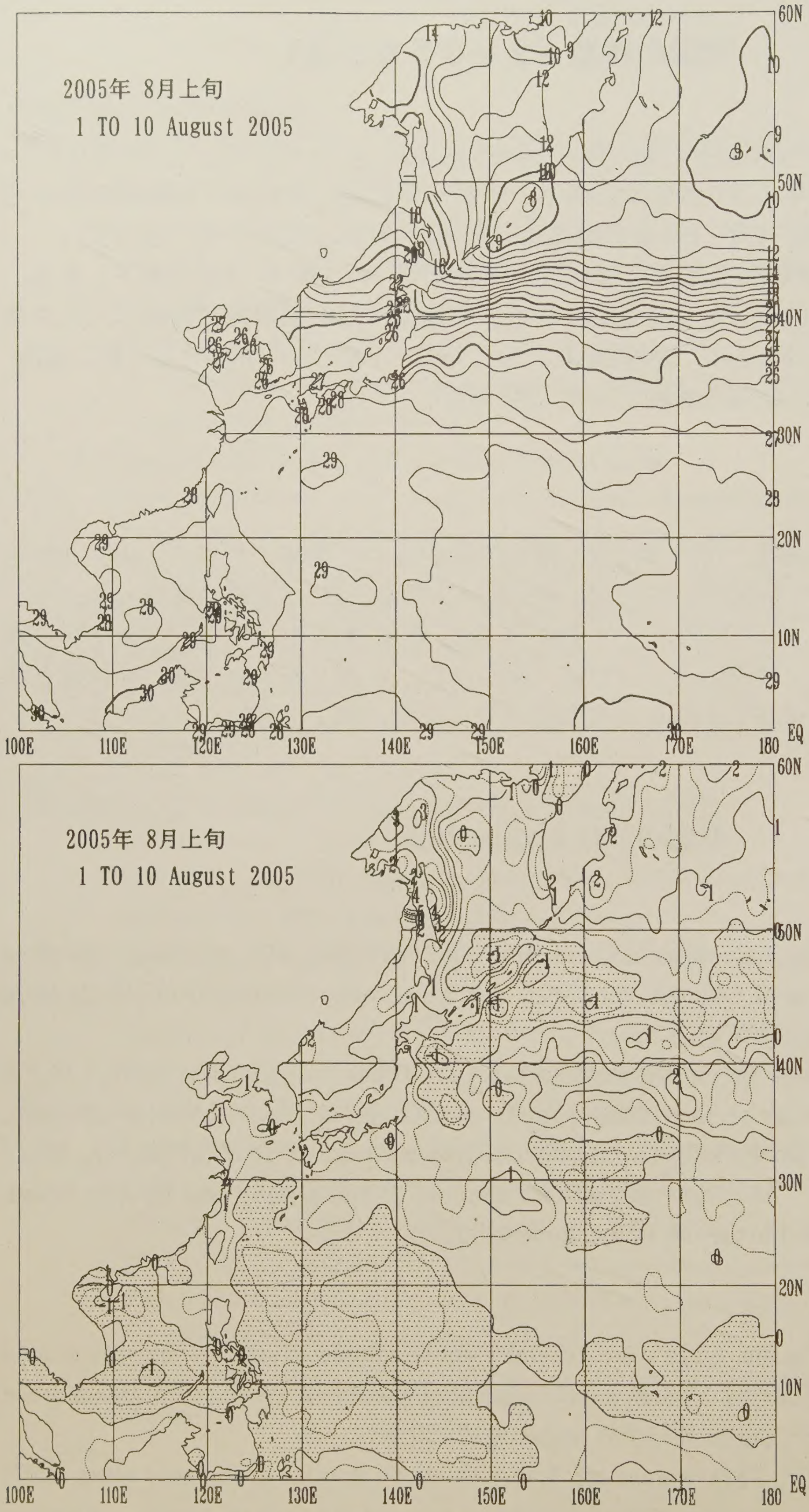
The Kuroshio flowed off the Kii Peninsula and off Tokai. It flowed to 32°N, 138.5°E and passed south of Hachijo Island, then it flowed northward along 141°E in early and mid-August. The southernmost position of the kuroshio meander moved eastward to south of Hachijo Island along 32°N in mid-August. After flowing eastward along 33°N and passing near Hachijo Island, the Kuroshio flowed NE-ward in the rest of the month (Fig. 9).

Pacific Ocean

In the equatorial Pacific, SSTs were generally above normal except for the seas around 160°W and west of South America. Positive SST anomalies exceeding +0.5℃ were found in the seas between 160°E and 175°E, around 130°W and around 120°W.

In the North Pacific, SSTs were more than 1℃ above normal in the seas along 35°N from 170°W to 150°W, in the western part of the Bering Sea and the Gulf of Alaska. Negative SST anomalies exceeding -0.5℃ were found around 45°N, 165°E and off the California Peninsula (Fig. 17).

Ten-day mean SST & Anomalies

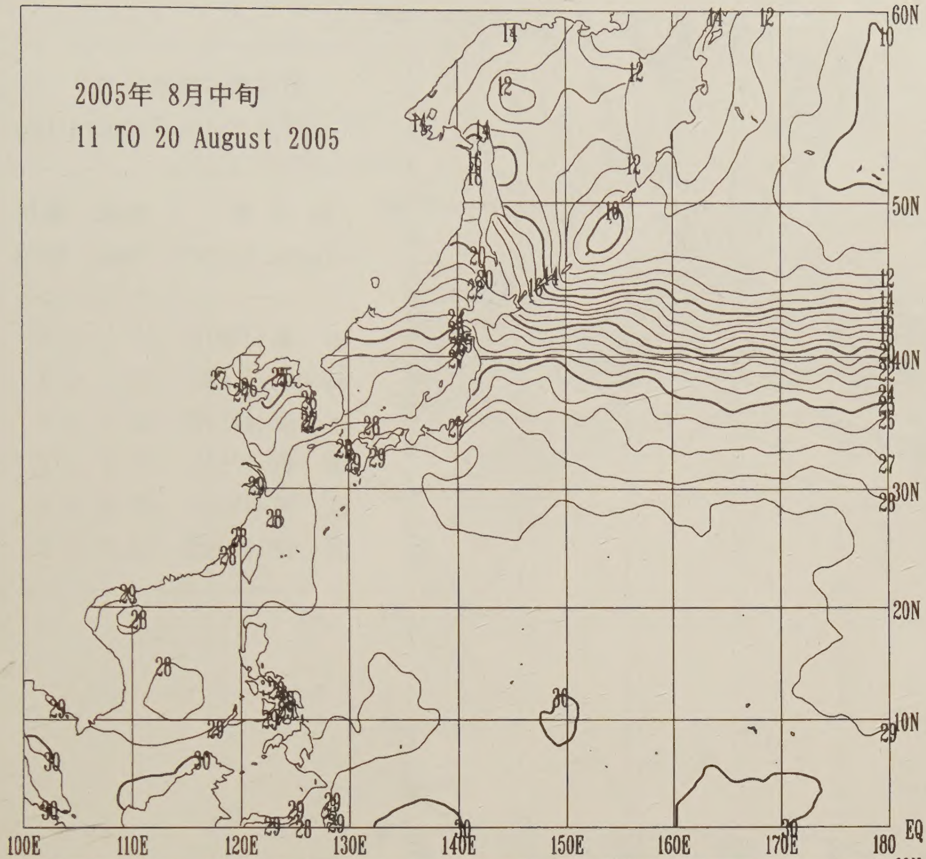


旬平均沿岸水温(℃) Coastal Water Temperature		
地 点 名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	-	-
御前崎(47655)	24.8	-0.7
小名浜(47598)	20.1	-0.3
宮　古(47585)	19.4	0.6
江　差(47428)	22.8	0.8
浜　田(47755)	27.9	1.7

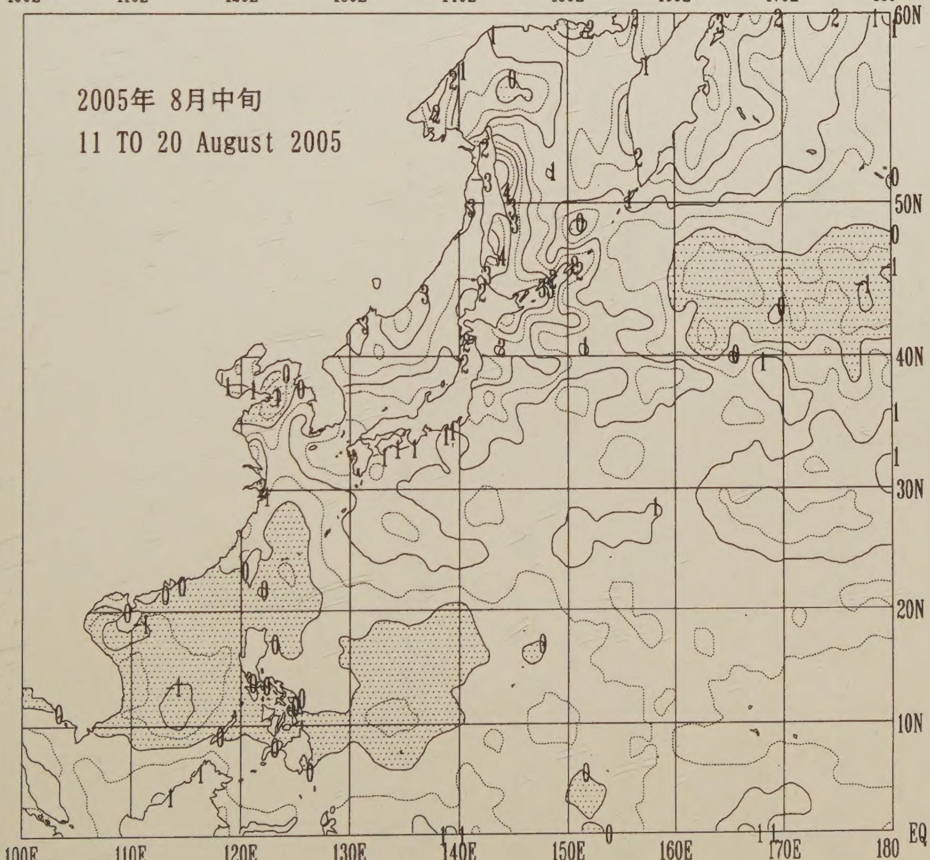
第1図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(2005年 8月上旬)

Fig.1 Ten-day mean SST (top) and anomalies (bottom) in the western North Pacific for the 1st ten-day period in August 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are stippled.

Ten-day mean SST & Anomalies



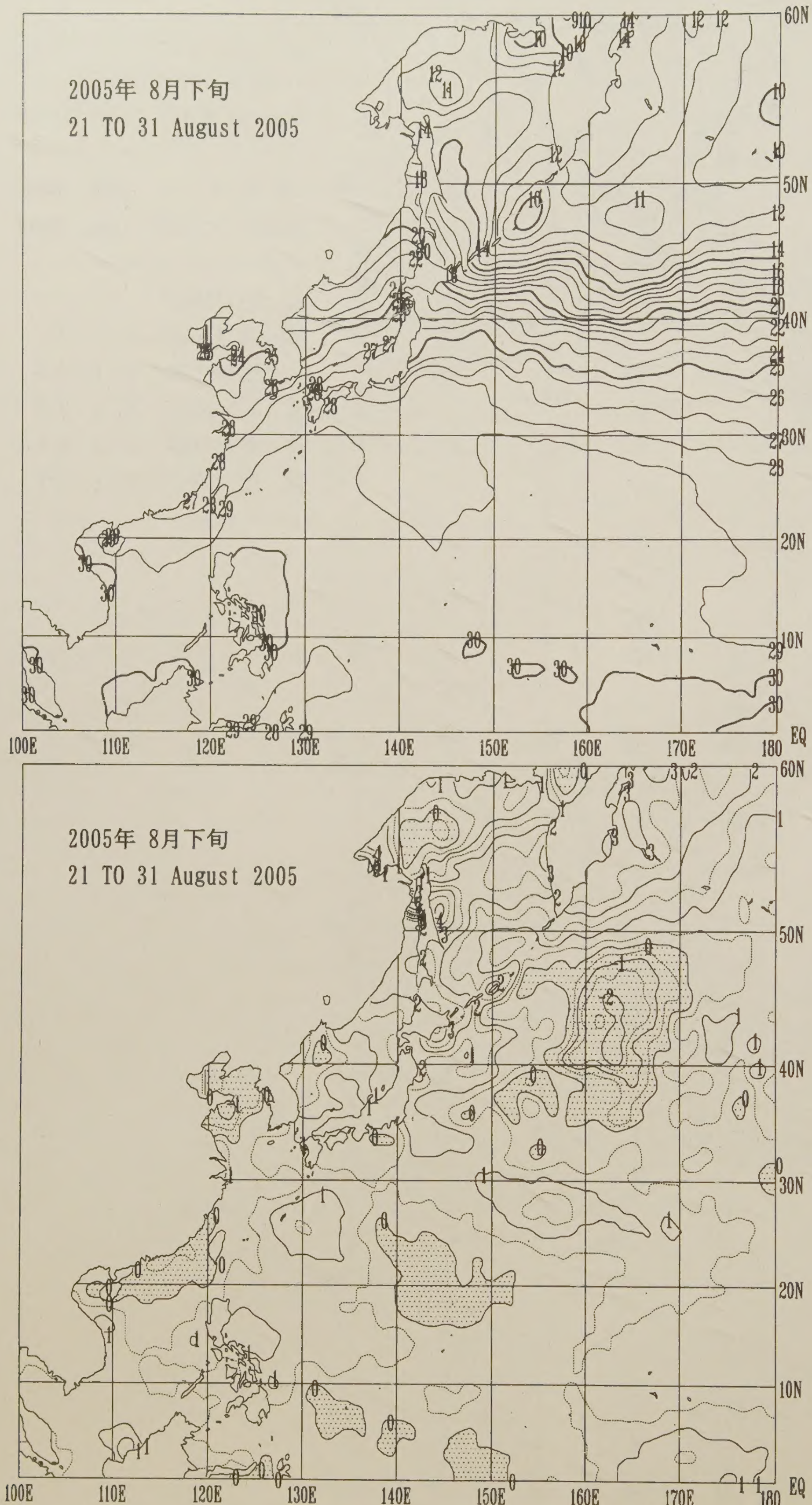
旬平均沿岸水温(℃) Coastal Water Temperature		
地点名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	-	-
御前崎(47655)	25.9	-0.2
小名浜(47598)	21.1	-0.3
宮　古(47585)	20.3	0.6
江　差(47428)	25.9	2.9
浜　田(47755)	29.2	2.6



第2図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(2005年 8月中旬)

Fig. 2 Ten-day mean SST (top) and anomalies (bottom) in the western North Pacific for the 2nd ten-day period in August 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are stippled.

Ten-day mean SST & Anomalies



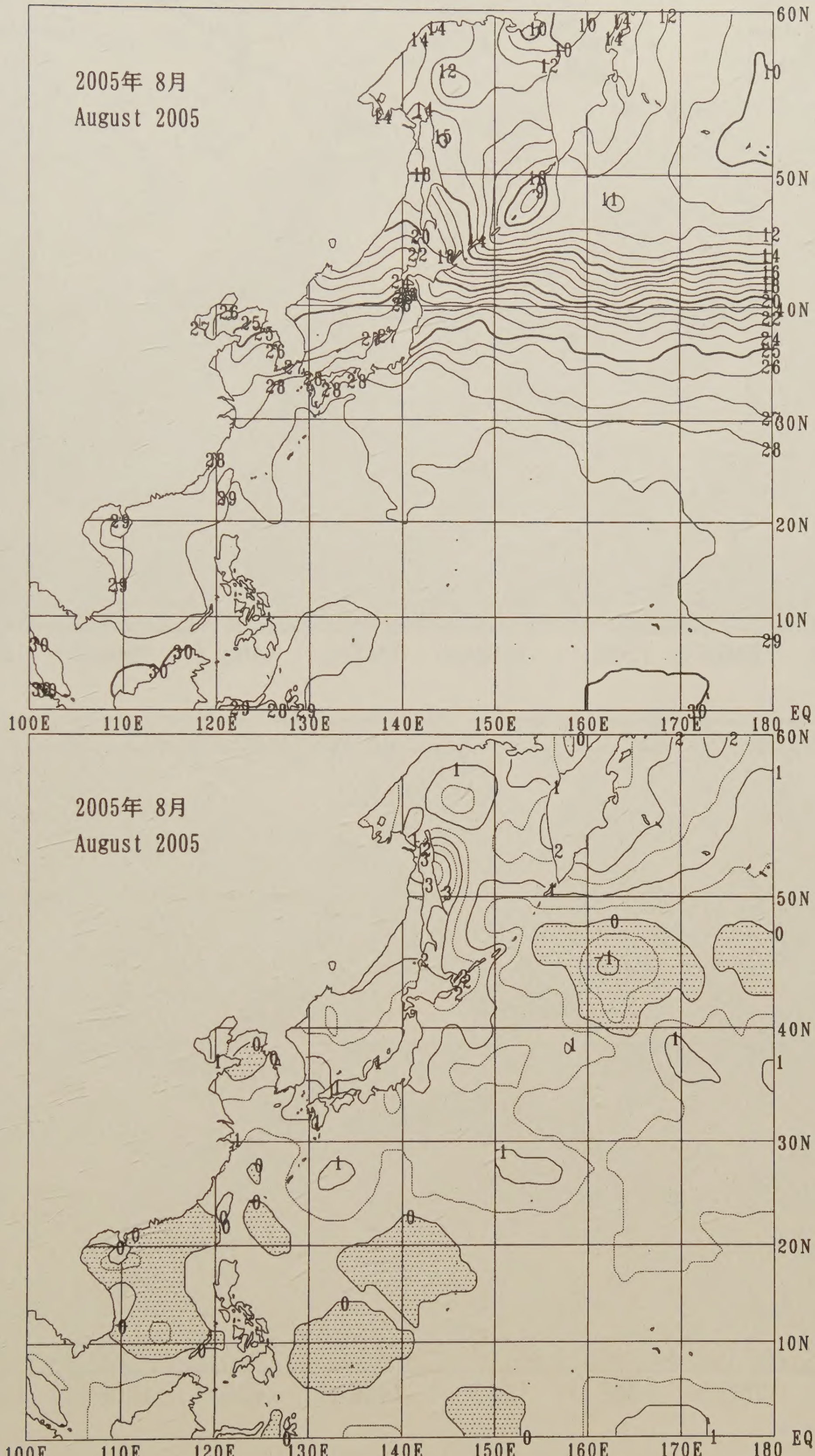
旬平均沿岸水温(℃)
Coastal Water Temperature

地点名 (Index Number)	水温 Temp.	偏差 Anom.
石　垣(47918)	27.8	-1.0
御前崎(47655)	25.7	-0.2
小名浜(47598)	22.1	0.0
宮　古(47585)	21.9	1.7
江　差(47428)	25.0	1.5
浜　田(47755)	28.0	1.2

第3図 北西太平洋旬平均海面水温図(上)及び偏差図(下) (2005年 8月下旬)

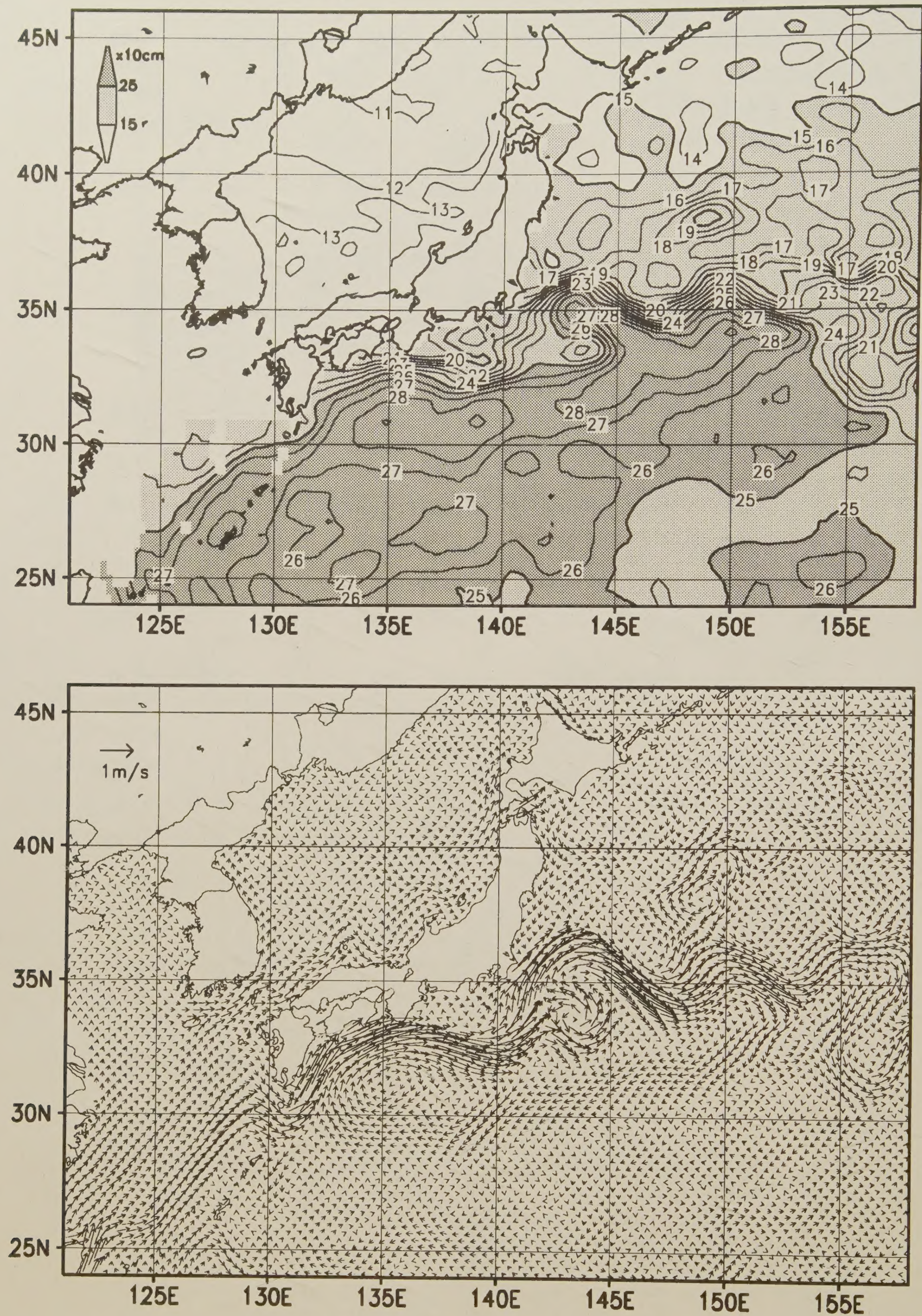
Fig.3 Ten-day mean SST (top) and anomalies (bottom) in the western North Pacific for the 3rd ten-day period in August 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are stippled.

Monthly Mean SST & Anomalies



第4図 北西太平洋月平均海面水温図(上)及び偏差図(下) (2005年 8月)

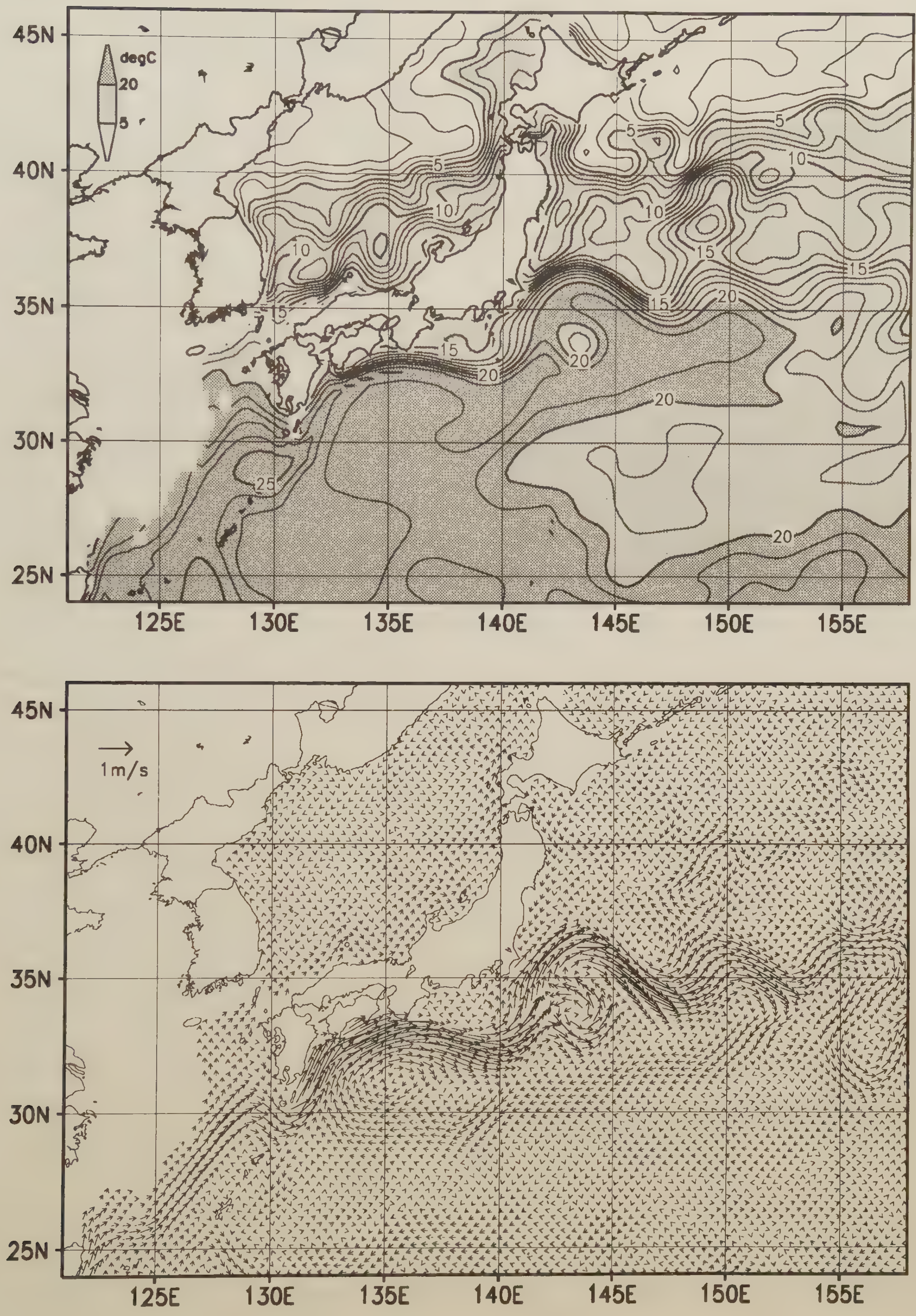
Fig. 4 Monthly mean SST (top) and anomalies (bottom) in the western North Pacific for August 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of 0.5°C are shown by broken lines. Negative anomalies are stippled.



第 5 図　日本近海月平均海面高度分布図 (上) と海面海流図 (下)　(2005 年 8 月)
（海洋総合解析システムによる）

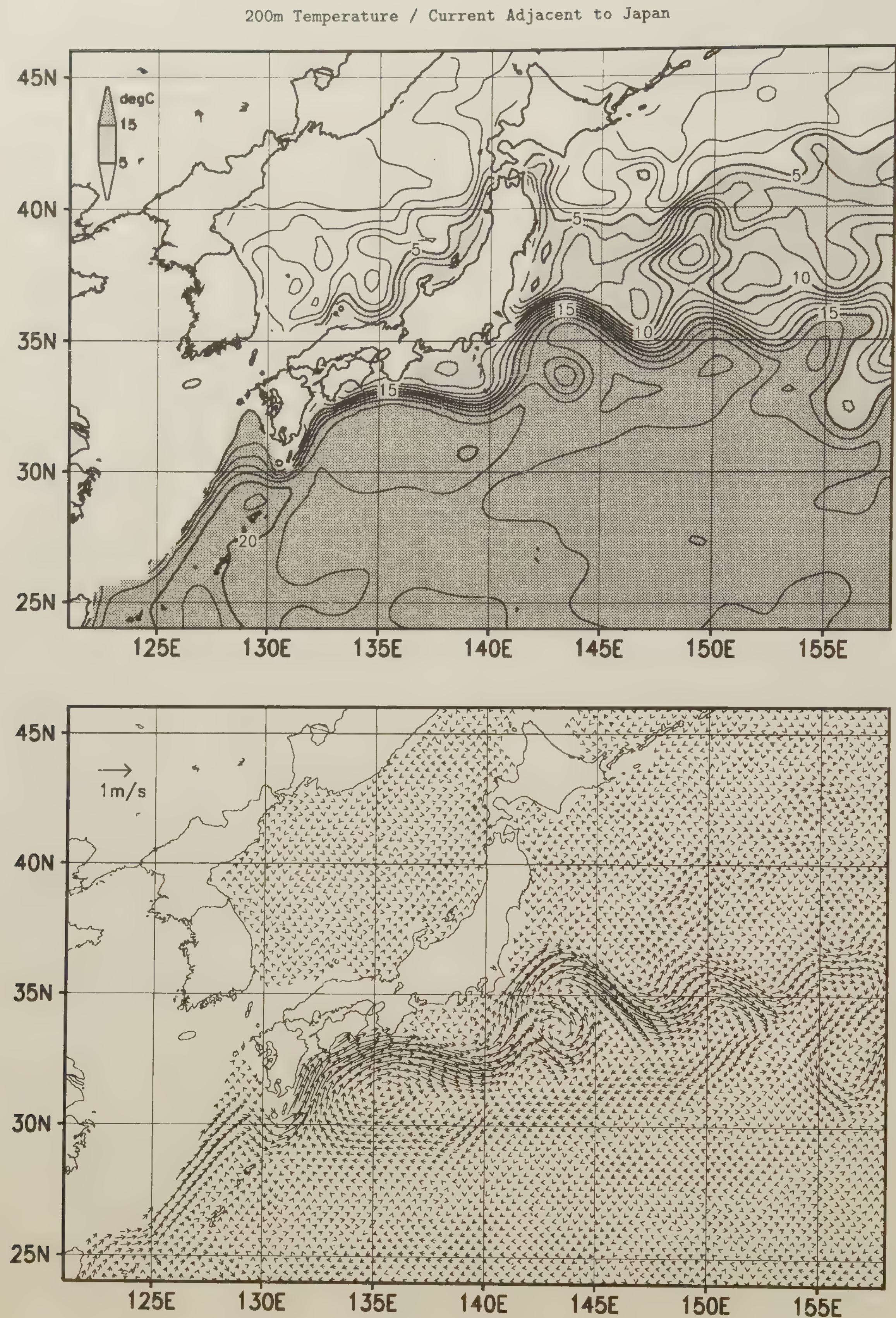
Fig. 5　Monthly mean sea surface height (top) and current (bottom) in seas adjacent to Japan for August 2005. Contour interval is 10cm (top). (calculated by the Ocean Comprehensive Analysis System)

100m Temperature / Current Adjacent to Japan



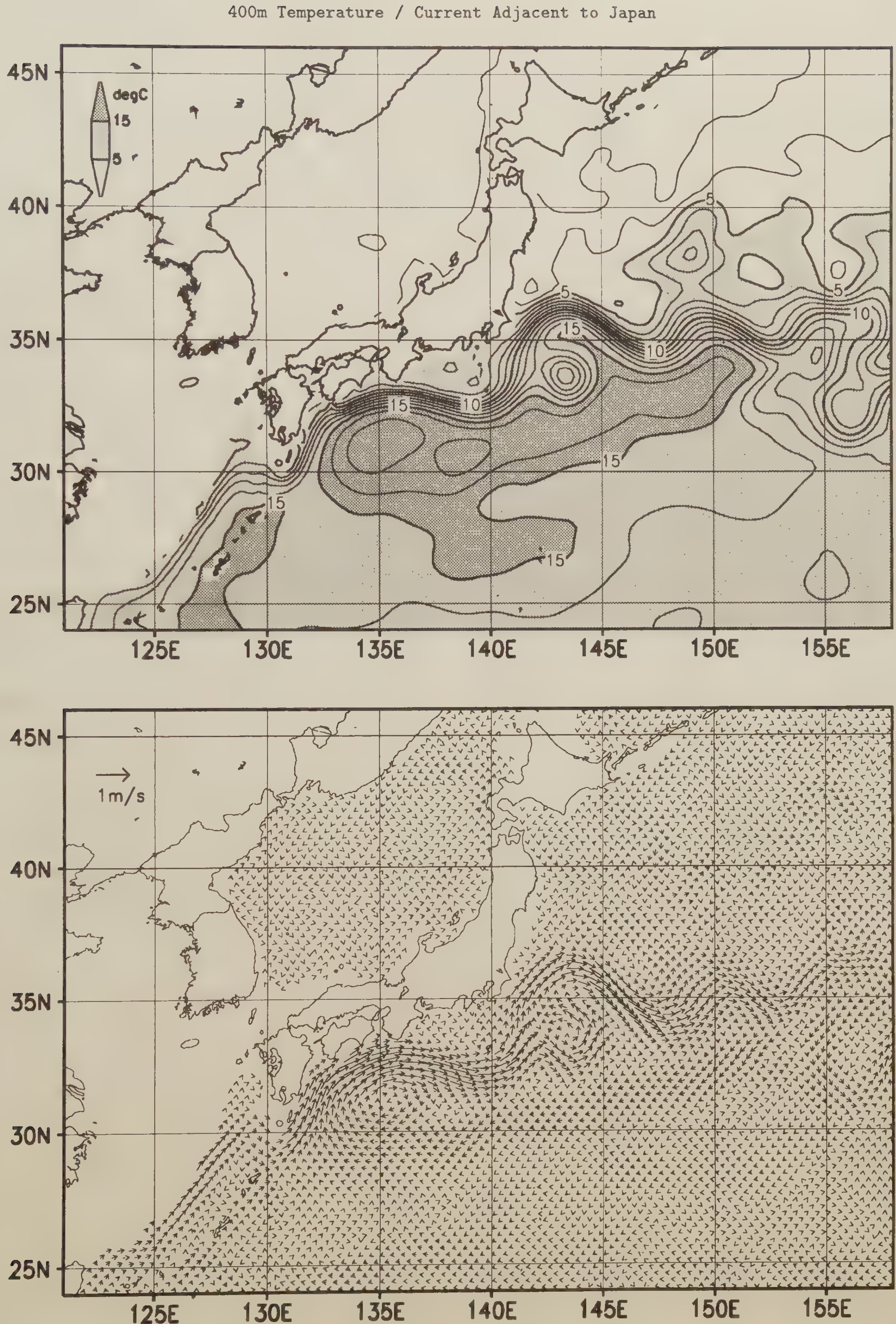
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Fig. 6　Monthly mean subsurface (100 m) temperature (top) and current (bottom) in seas adjacent to Japan for August 2005. Contour interval is 1 ℃ (top). (calculated by the Ocean Comprehensive Analysis System)



第７図　日本近海月平均表層水温図（上）と表層海流図（下）　（深さ 200 m）（2005 年 8 月）
（海洋総合解析システムによる）

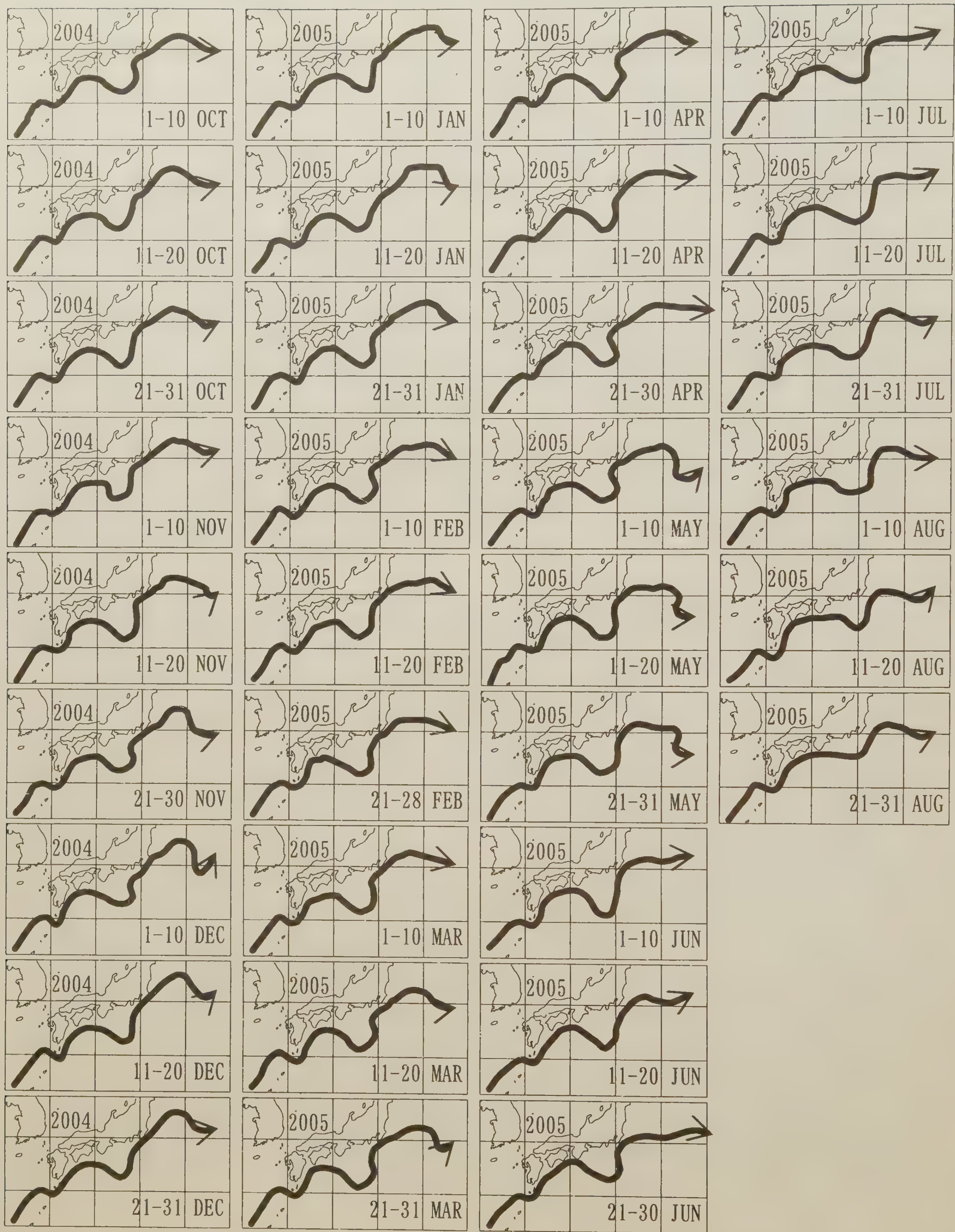
Fig. 7　Monthly mean subsurface (200 m) temperature (top) and current (bottom) in seas adjacent to Japan for August 2005. Contour interval is 1 ℃ (top). (calculated by the Ocean Comprehensive Analysis System)



第８図　日本近海月平均表層水温図（上）と表層海流図（下）（深さ 400 m）(2005 年 8 月）
（海洋総合解析システムによる）

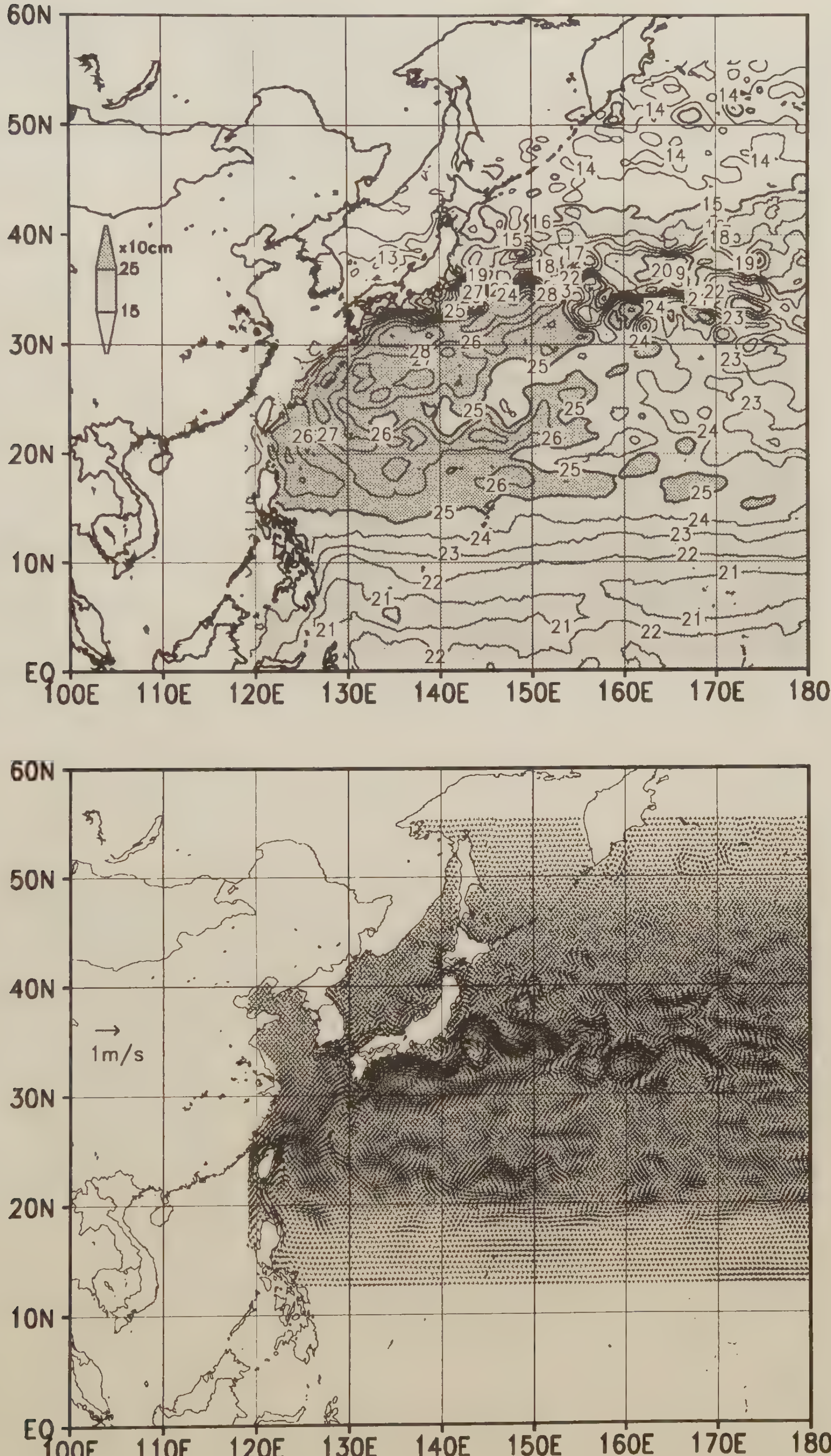
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Location of the Kuroshio axis



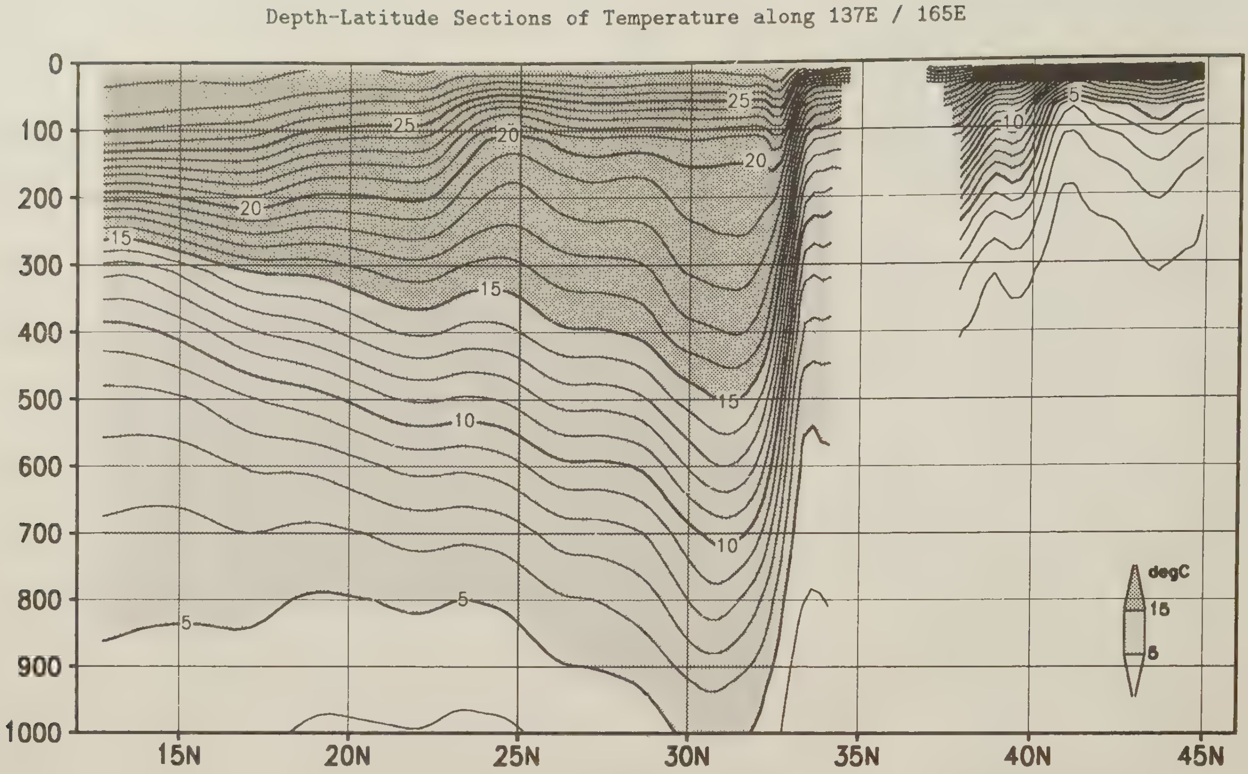
第9図 旬別黒潮流軸図

Fig. 9 Location of the Kuroshio axis



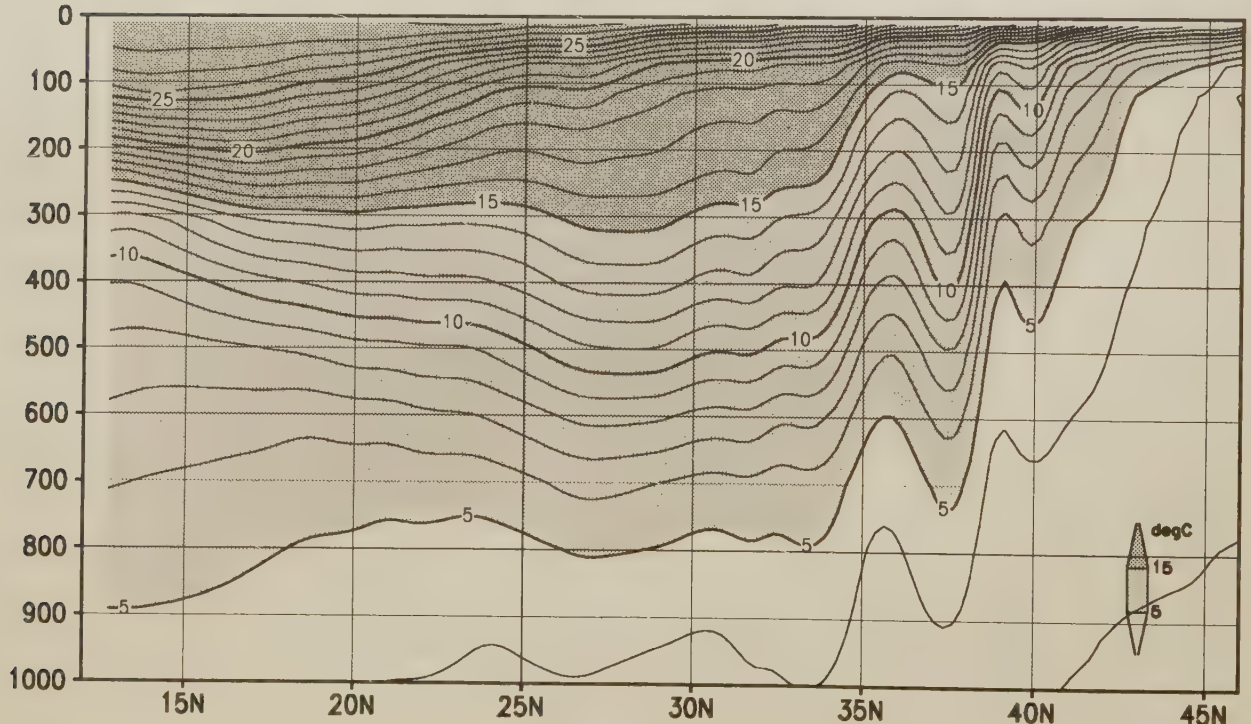
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Fig. 10　Monthly mean sea surface height (top) and current (bottom) in the western North Pacific for August 2005. Contour interval is 10cm (top). (calculated by the Ocean Comprehensive Analysis System)



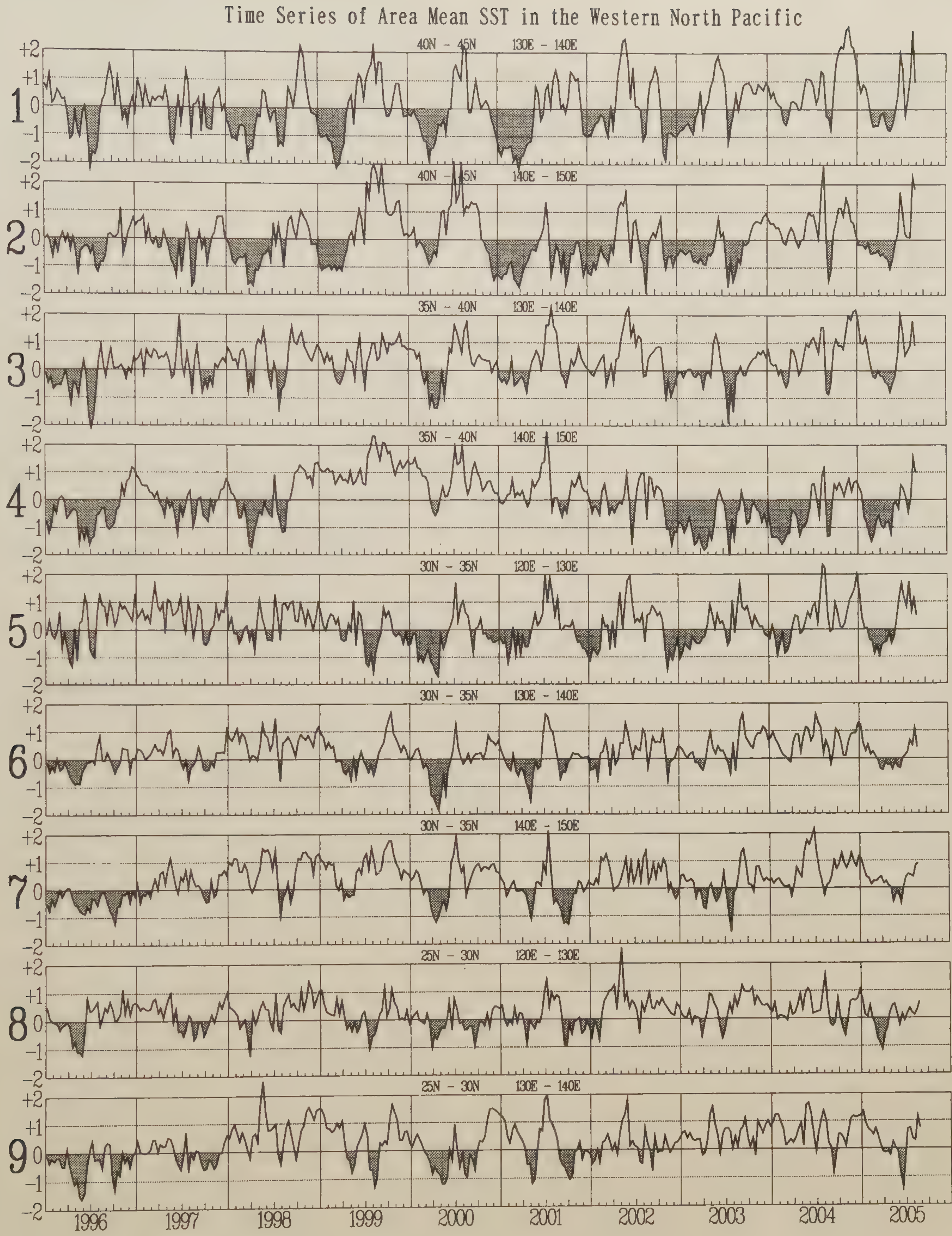
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（海洋総合解析システムによる）

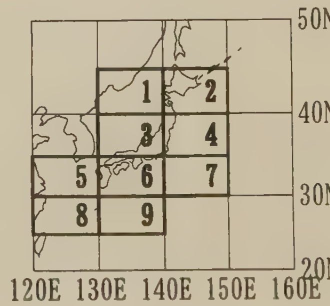
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（海洋総合解析システムによる）

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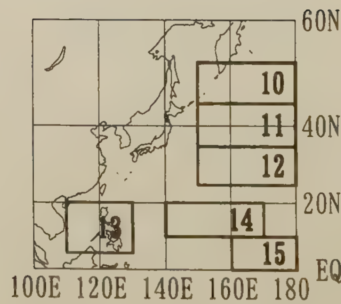


第13図　海域別旬平均海面水温平年偏差時系列図

Fig. 13 Time series of the ten-day mean SST anomalies (°C) averaged for the sub-areas shown in the right panel. Negative anomalies are shaded. Anomalies are computed from the JMA climatology (1971-2000).

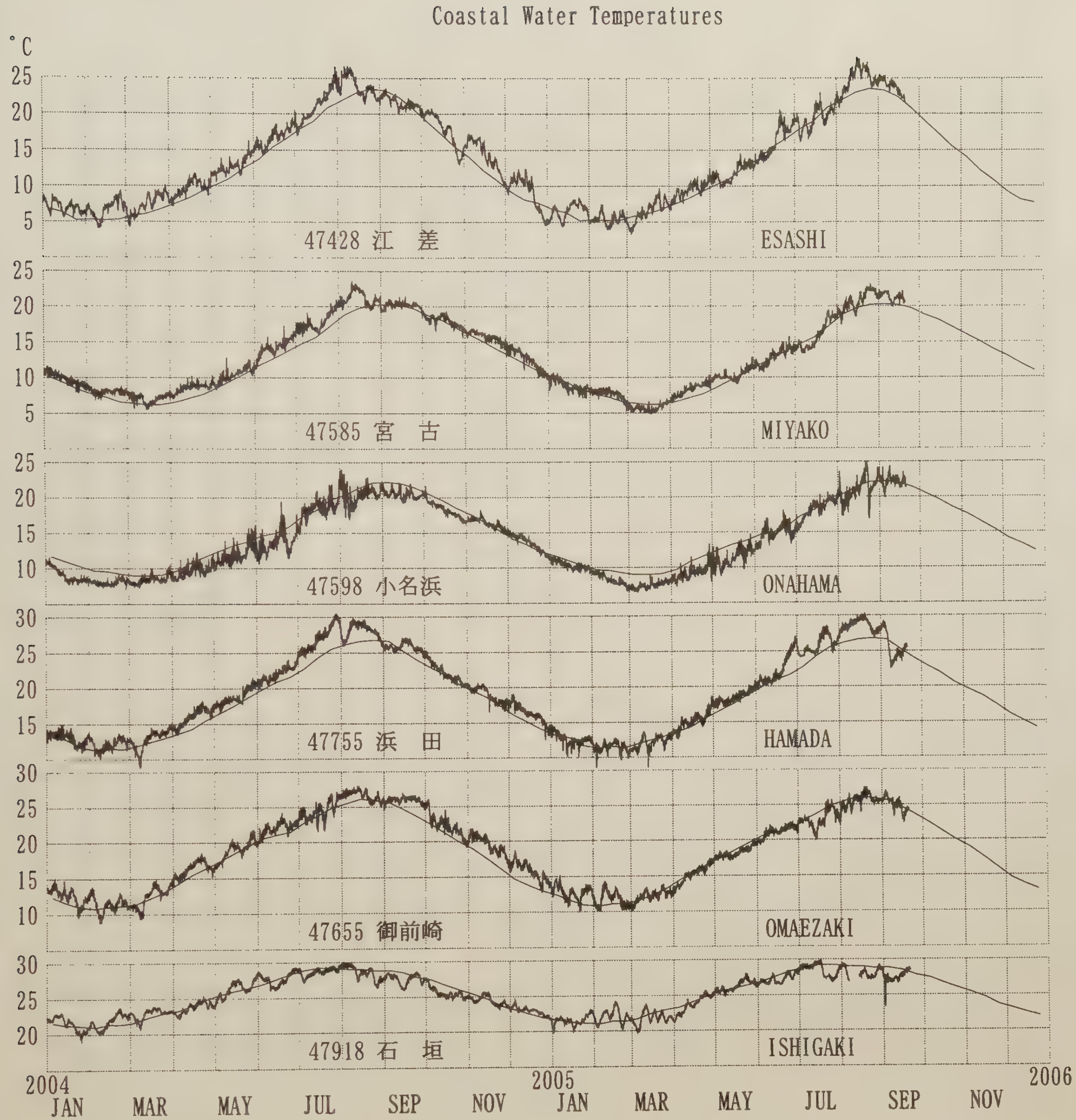
Time Series of Area Mean SST in the Western North Pacific





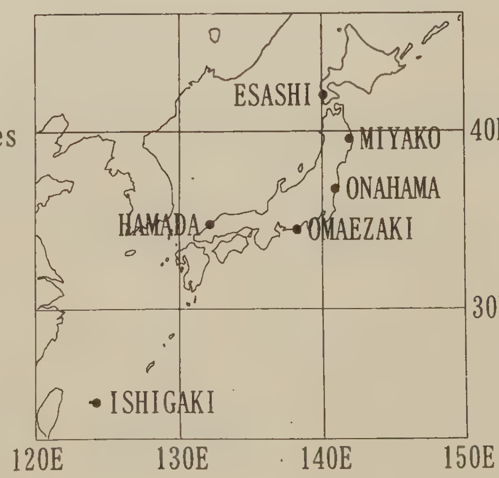
第13図　海域別旬平均海面水温平年偏差時系列図（つづき）

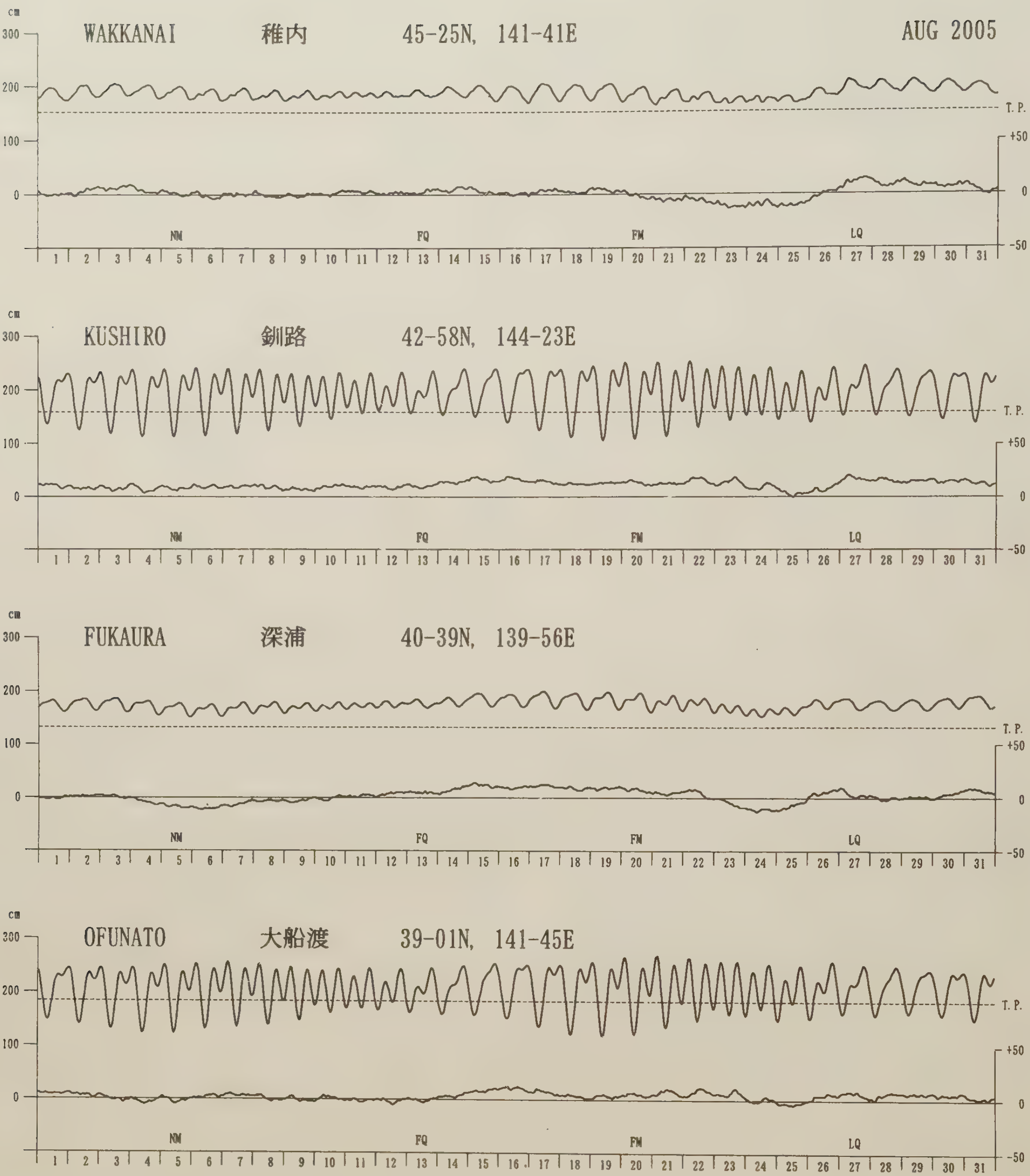
Fig. 13 (continued) Time series of the ten-day mean SST anomalies (°C) averaged for the sub-areas shown in the right panel. Negative anomalies are shaded. Anomalies are computed from the JMA climatology (1971-2000).



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Fig. 14 Time series of hourly coastal water temperatures (°C) measured at 6 coastal stations of the JMA shown in the right panel.
Thin lines show ten-day mean climatology.

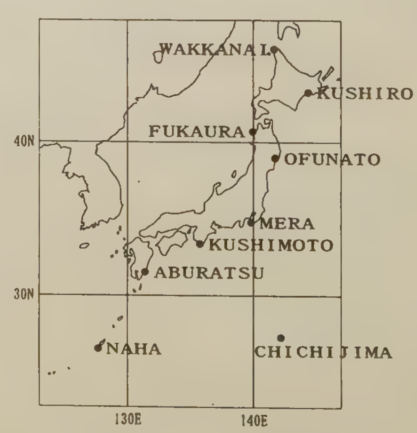




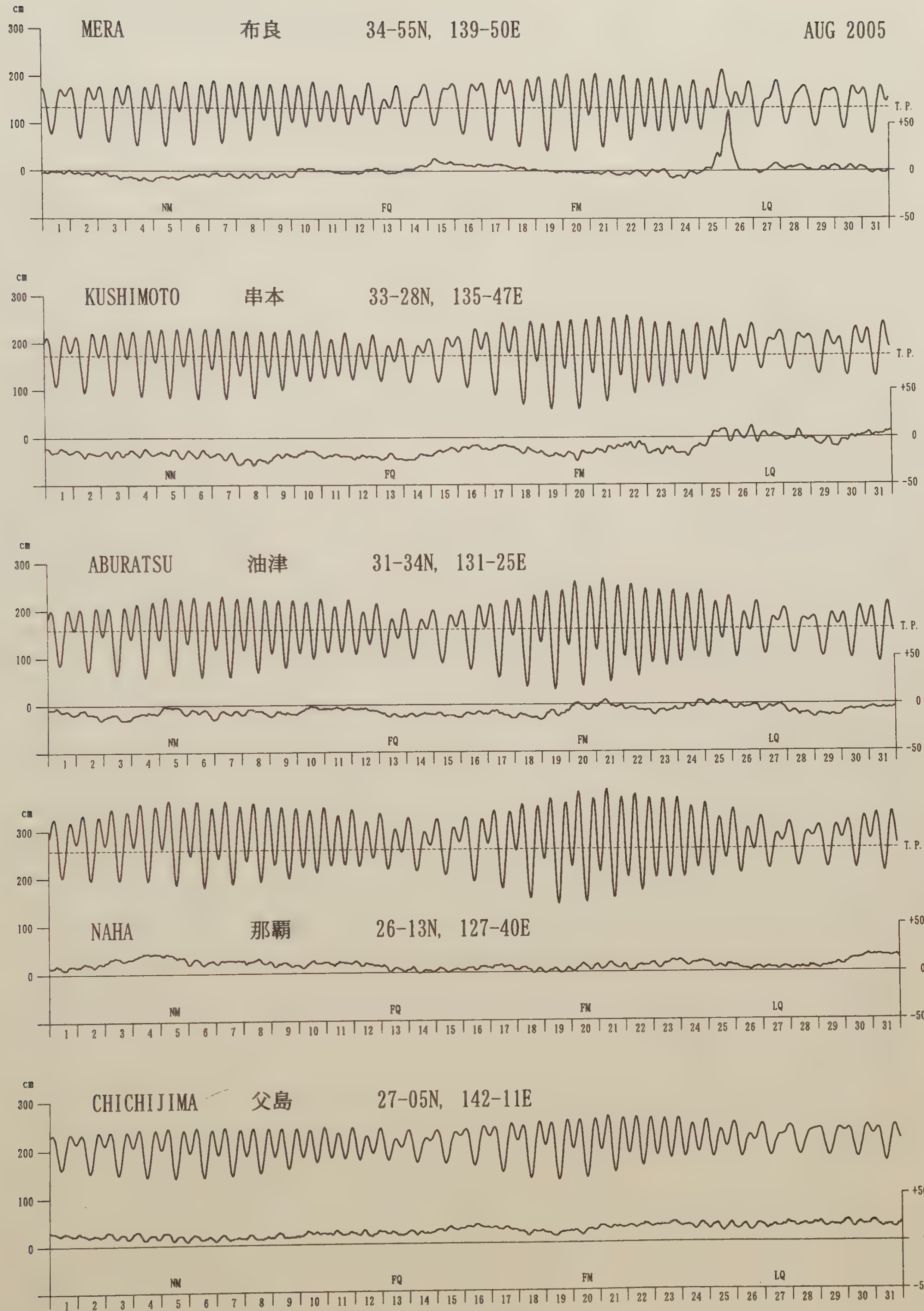
第15図 沿岸潮位時系列図 (2005年 8月)

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Short term variations are filtered out from raw data.

NM: new moon, FQ: first quarter
FM: full moon, LQ: last quarter
T. P. : Mean sea level of Tokyo Bay (Tokyo Peil)

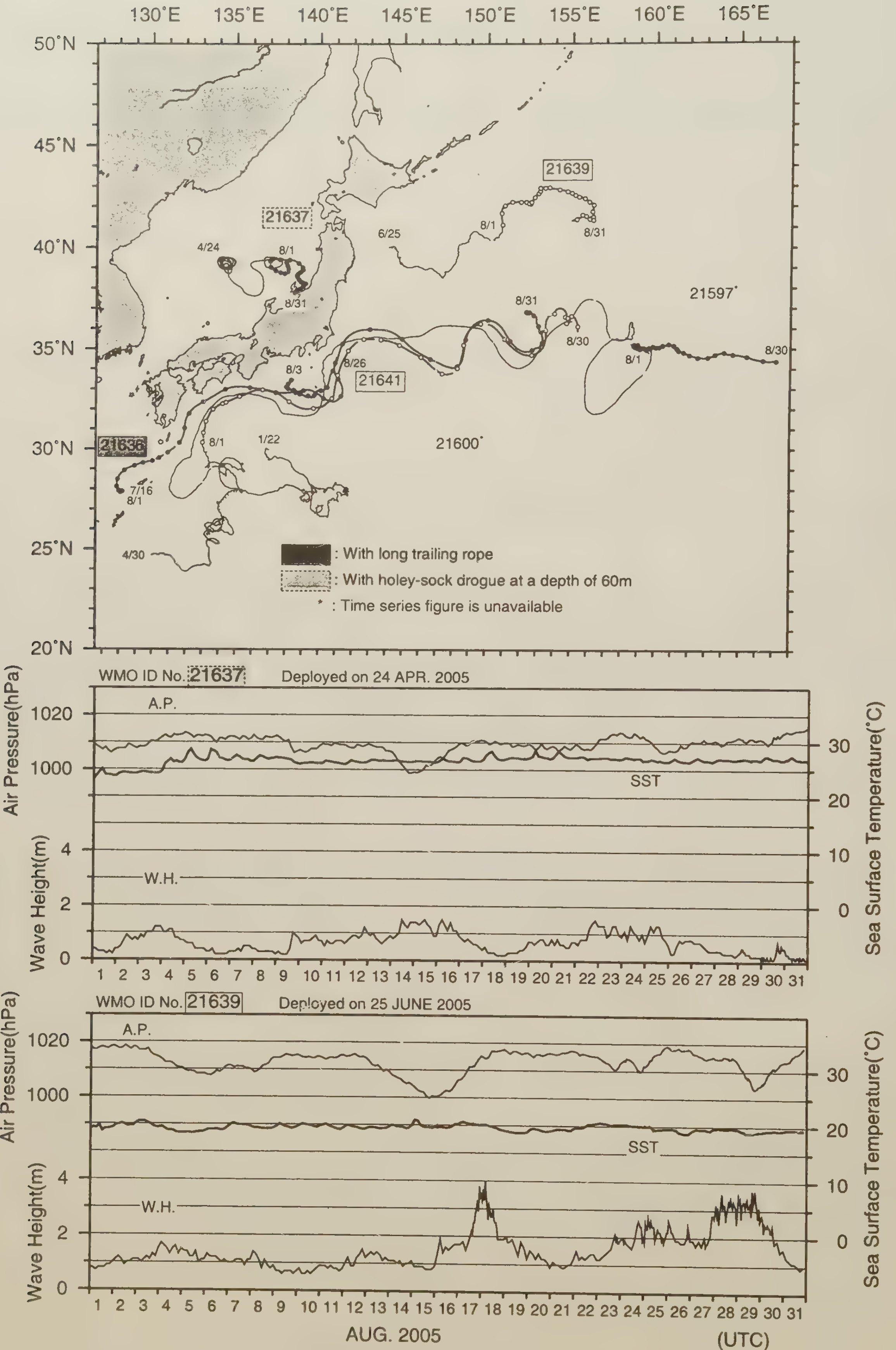


Time series of Sea Level



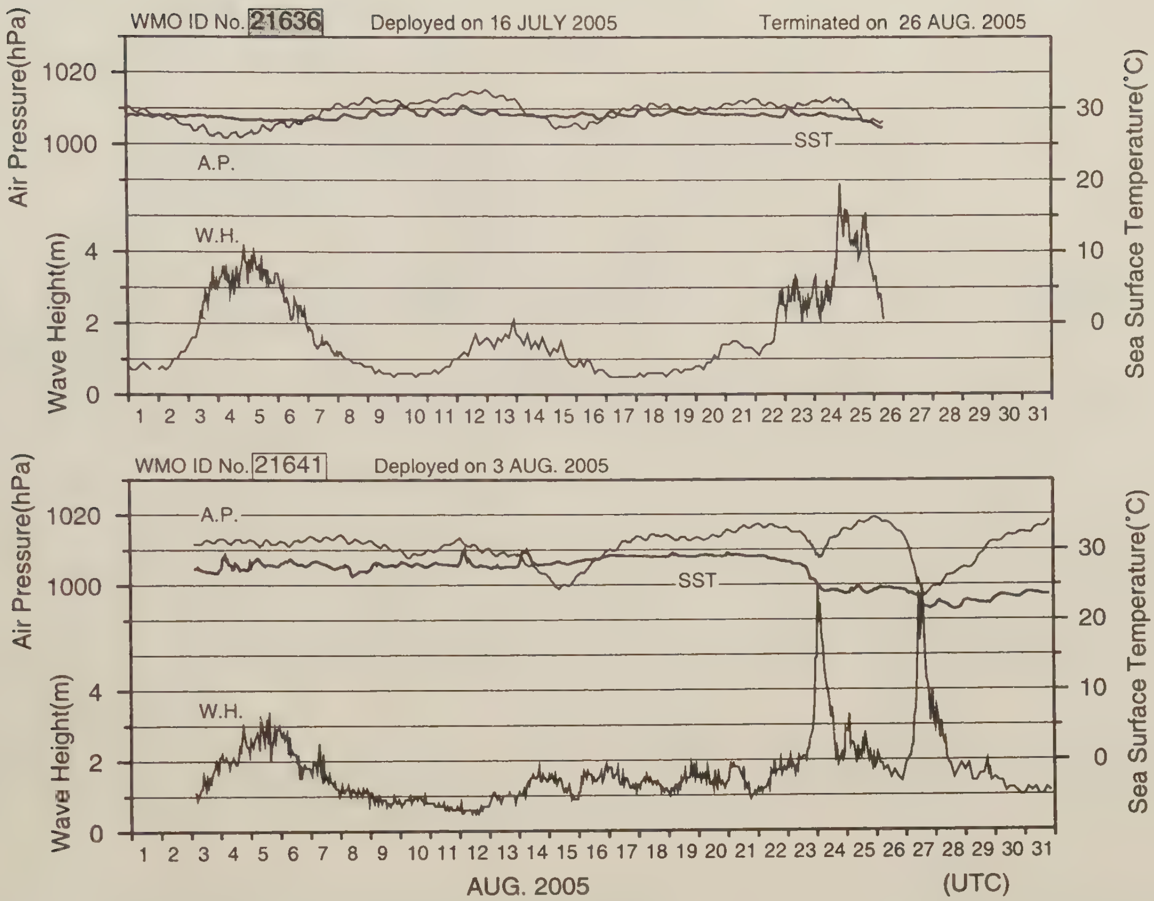
第15図 つづき

Fig. 15 (continued)



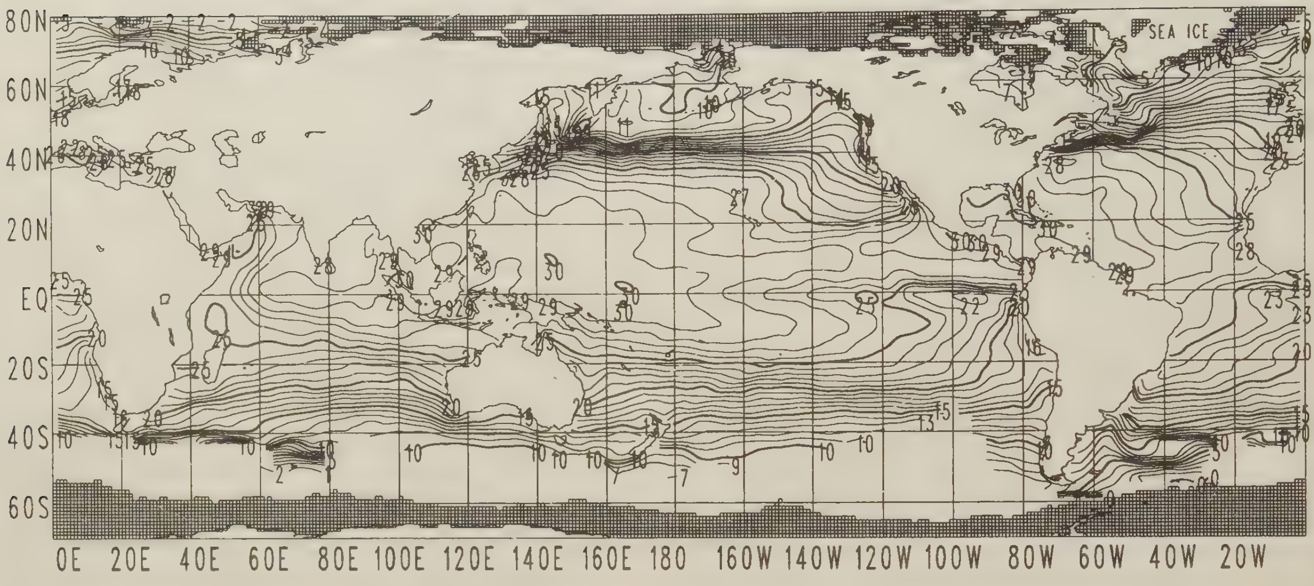
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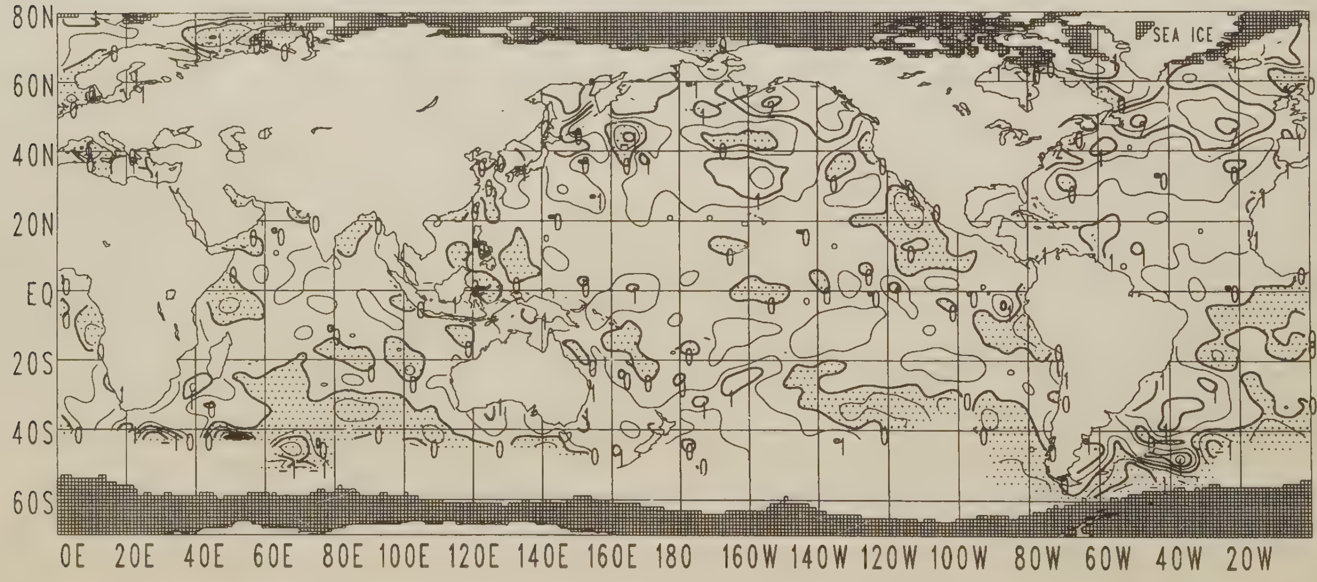
Fig.16　Time series of JMA drifting buoy observation.
The upper panel shows paths of the buoys. Circles denote the position at 00h UTC everyday.
The lower panel shows time series of observation data.



第16図つづき
Fig.16 (continued)

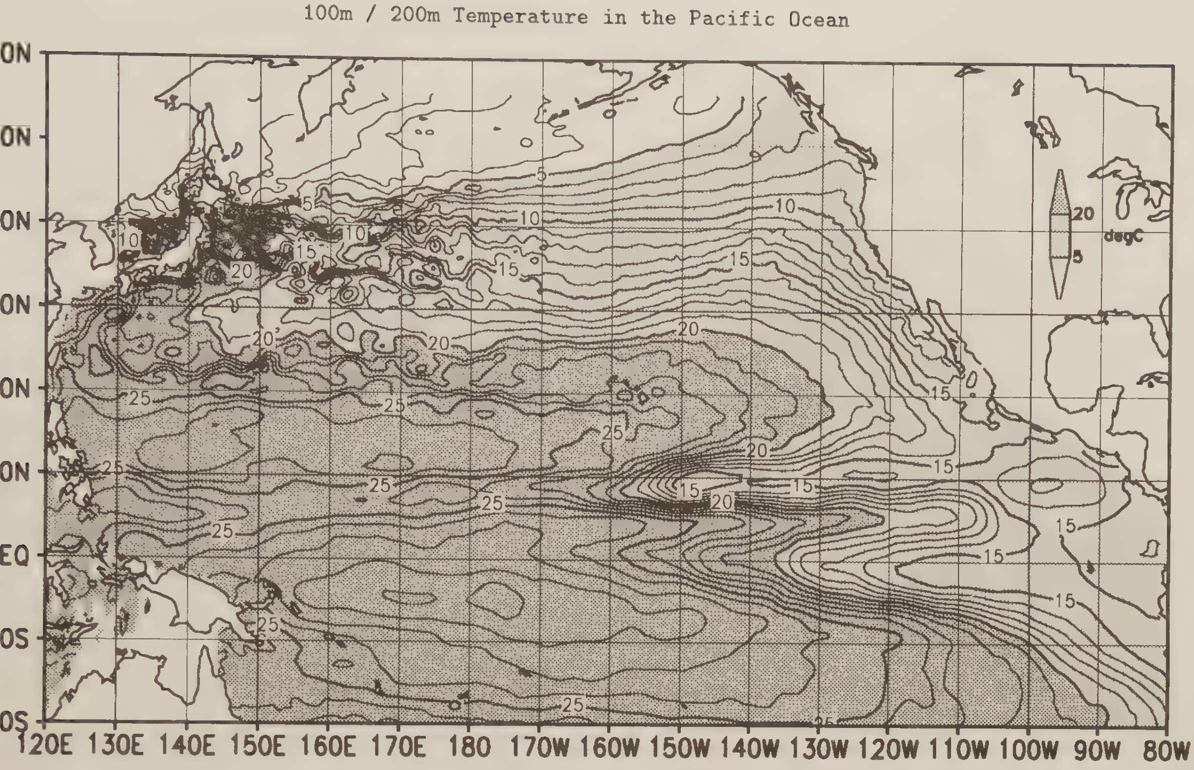
SST & Anomalies in the Global Ocean





第17図　全球月平均海面水温図（上）及び偏差図（下）（2005年 8月）

Fig. 17 Monthly mean SST over the global ocean (top) and anomalies (bottom) for August 2005. Anomalies are computed from the JMA climatology (1971-2000). Contour interval is 1°C and additional anomaly contours of ±0.5°C are shown by thin lines. Negative anomalies are stippled. Maximum coverage of sea ice is shaded. Data sources for sea ice are U.S. National Ice Center (polar regions) and JMA (the Sea of Okhotsk).



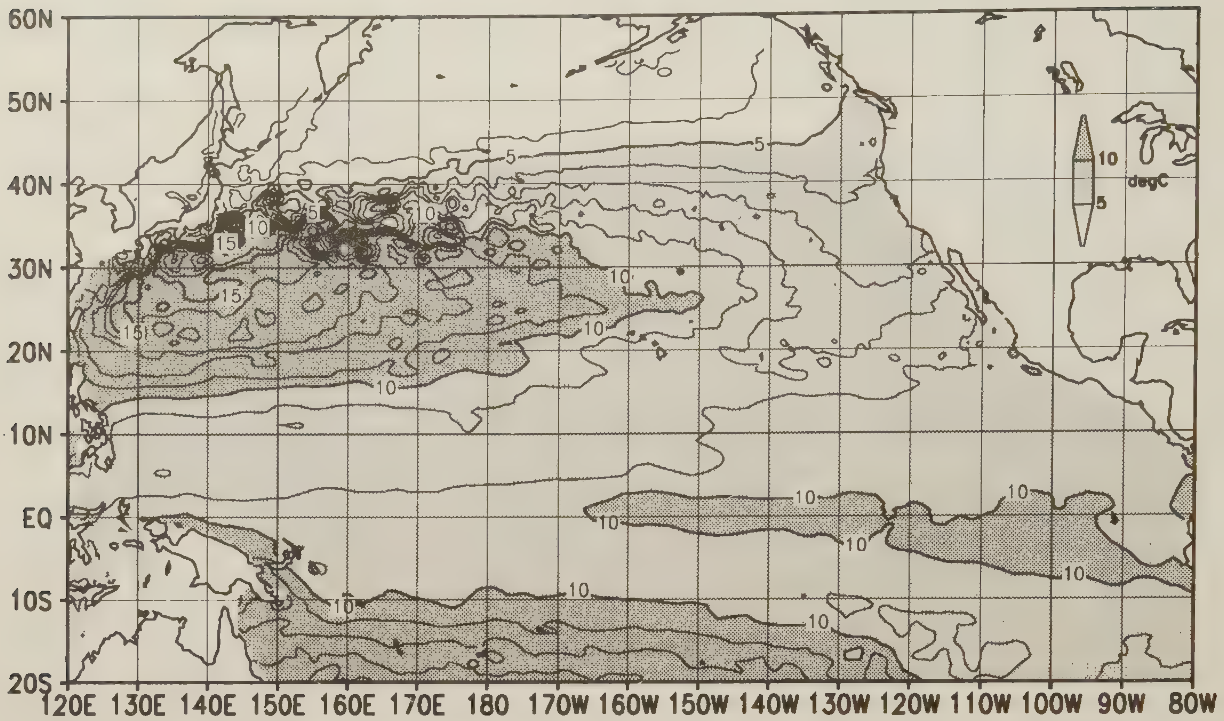
第 18 図　太平洋月平均表層水温図（深さ 100 m）　(2005 年 8 月)
（海洋総合解析システムによる）

Fig. 18　Monthly mean subsurface (100 m) temperature in the Pacific Ocean for August 2005. Contour interval is 1 ℃. (calculated by the Ocean Comprehensive Analysis System)



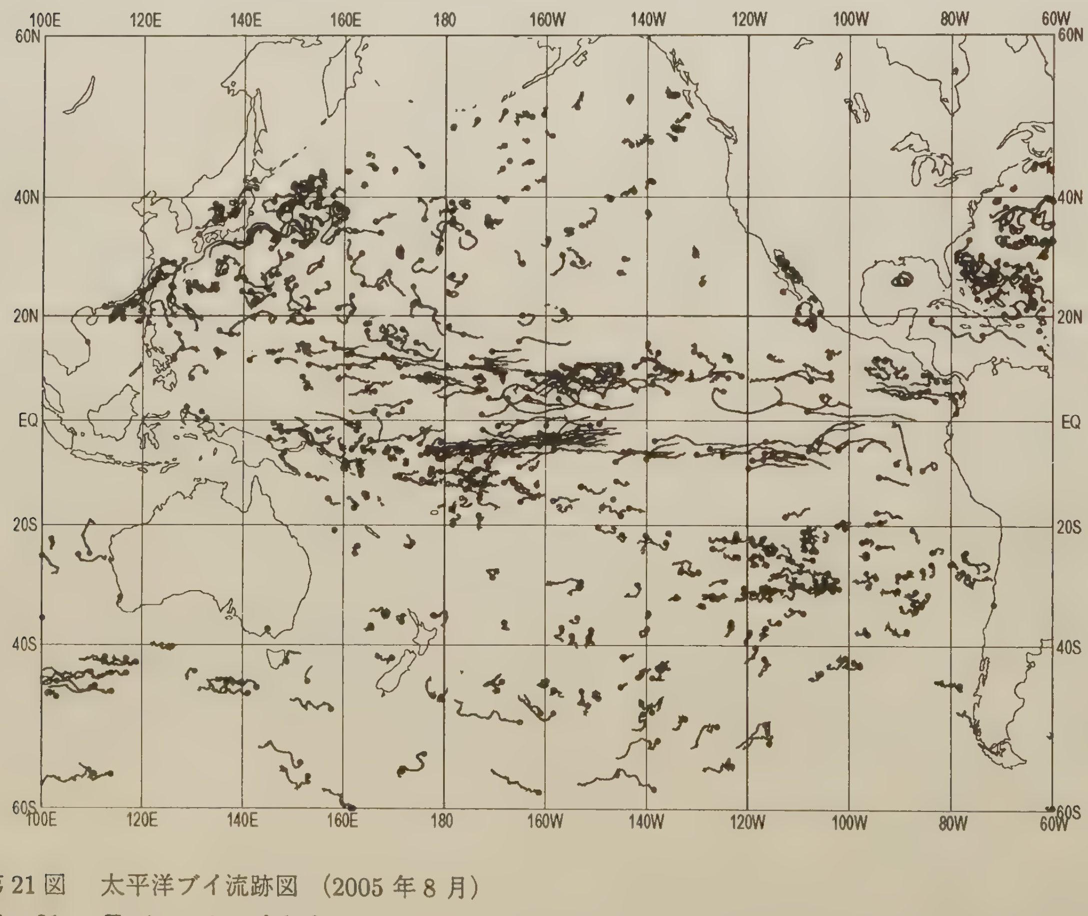
第 19 図　太平洋月平均表層水温図（深さ 200 m）　(2005 年 8 月)
（海洋総合解析システムによる）

Fig. 19　Monthly mean subsurface (200 m) temperature in the Pacific Ocean for August 2005. Contour interval is 1 ℃. (calculated by the Ocean Comprehensive Analysis System)



第 20 図　太平洋月平均表層水温図（深さ 400 m）　(2005 年 8 月)
（海洋総合解析システムによる）

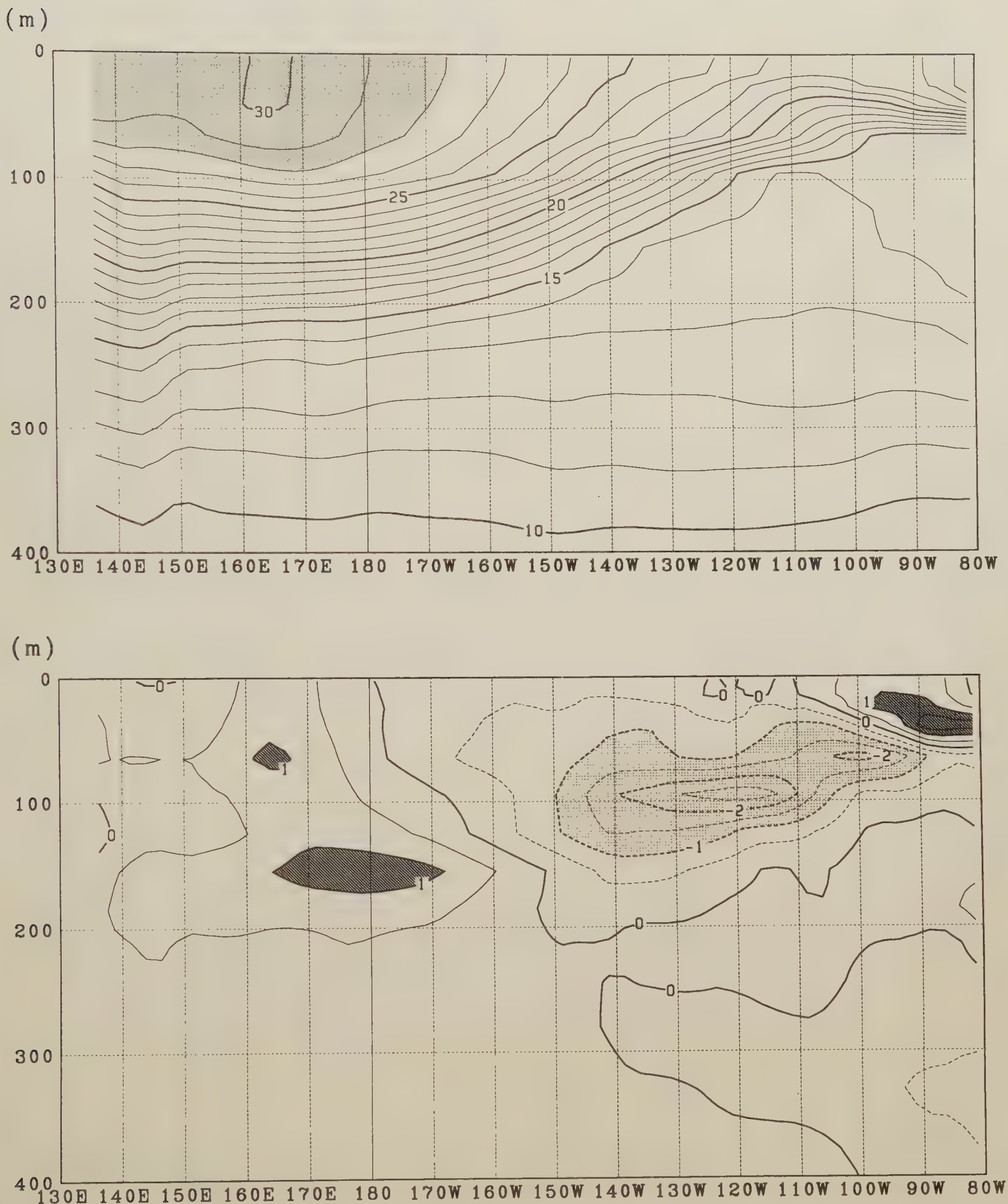
Fig. 20　Monthly mean subsurface (400 m) temperature in the Pacific Ocean for August 2005. Contour interval is 1 ℃. (calculated by the Ocean Comprehensive Analysis System)



第 21 図　太平洋ブイ流跡図　(2005 年 8 月)

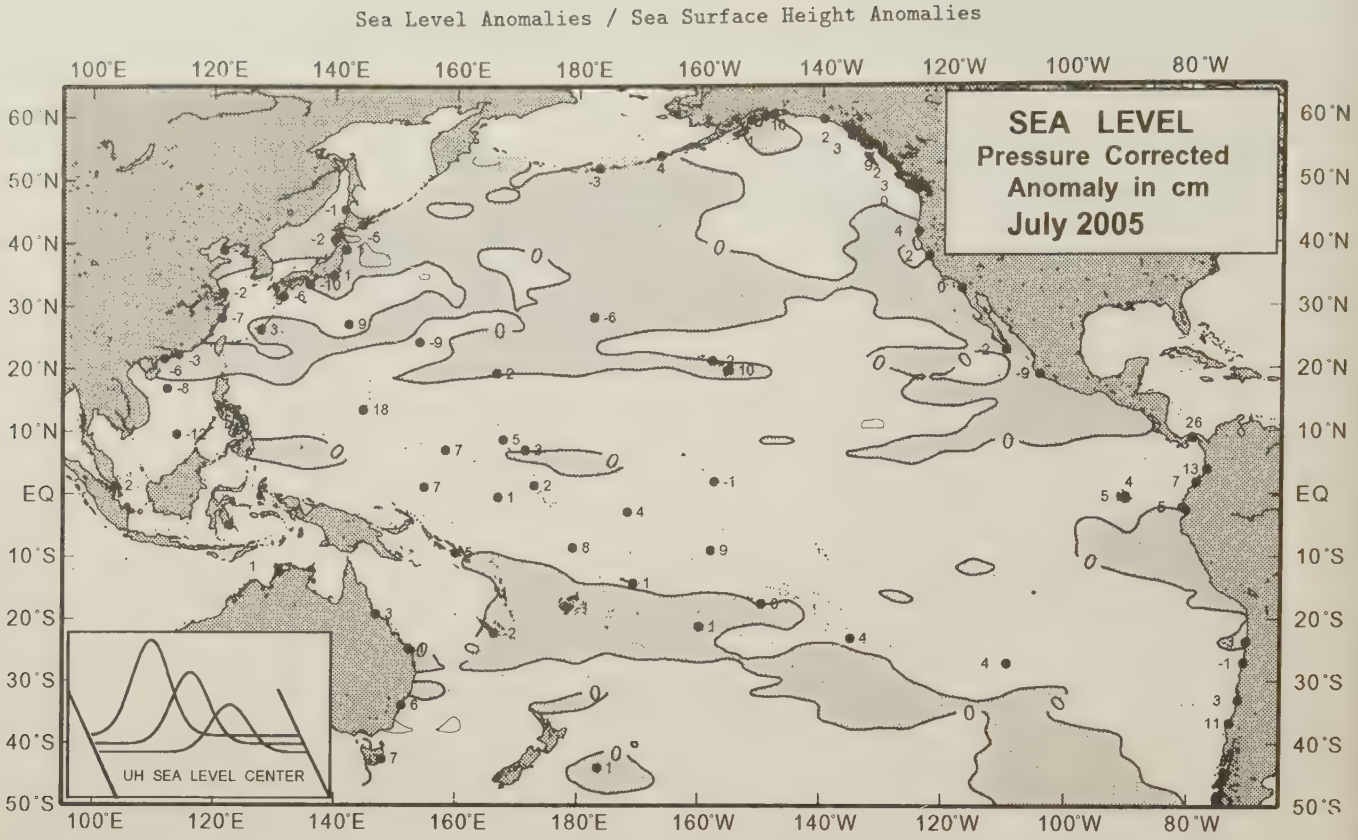
Fig. 21　Trajectories of drifting buoys in the Pacific Ocean during August 2005. Each track is for one buoy. Small circles represent the last positions for the month.

Depth-Longitude Sections of Equatorial Temperature & Anomalies



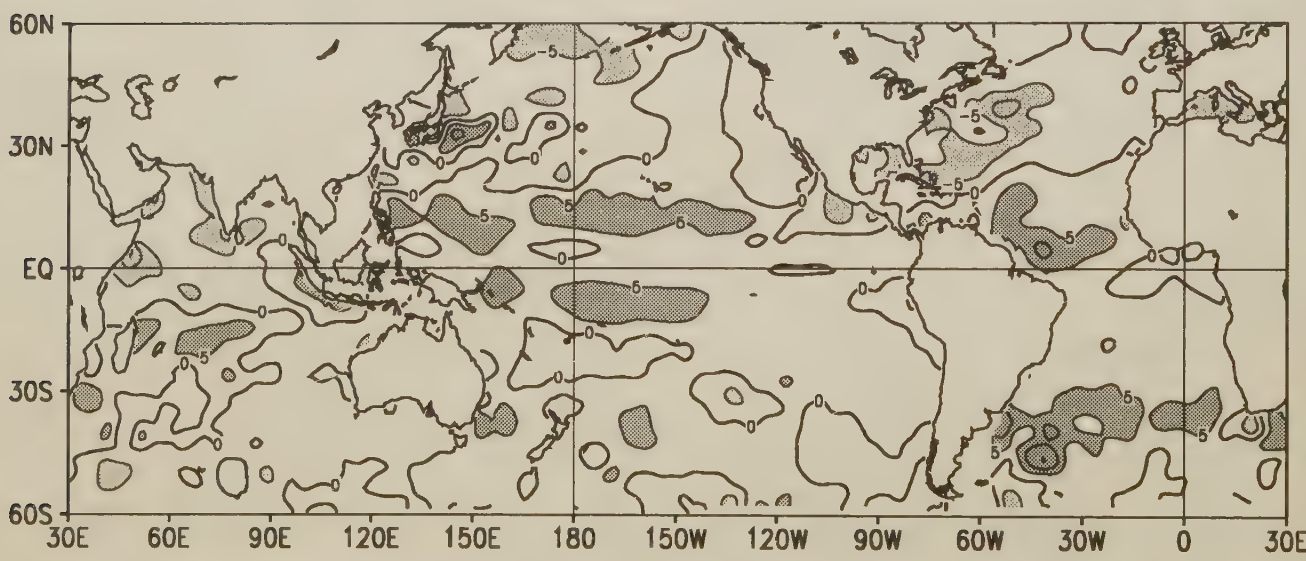
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Fig. 22 Depth-longitude sections of temperature (top) and anomalies (bottom) along the equator in the Pacific Ocean for August 2005. Data are derived from the Ocean Data Assimilation System of JMA. Contour intervals are 1°C (top) and 0.5°C (bottom). Values greater than 28°C in the top panel are shaded. In the bottom panel, values greater than 1°C are dark-shaded and values less than -1°C are light-shaded. Anomalies are computed from 1987-2004 base period means.



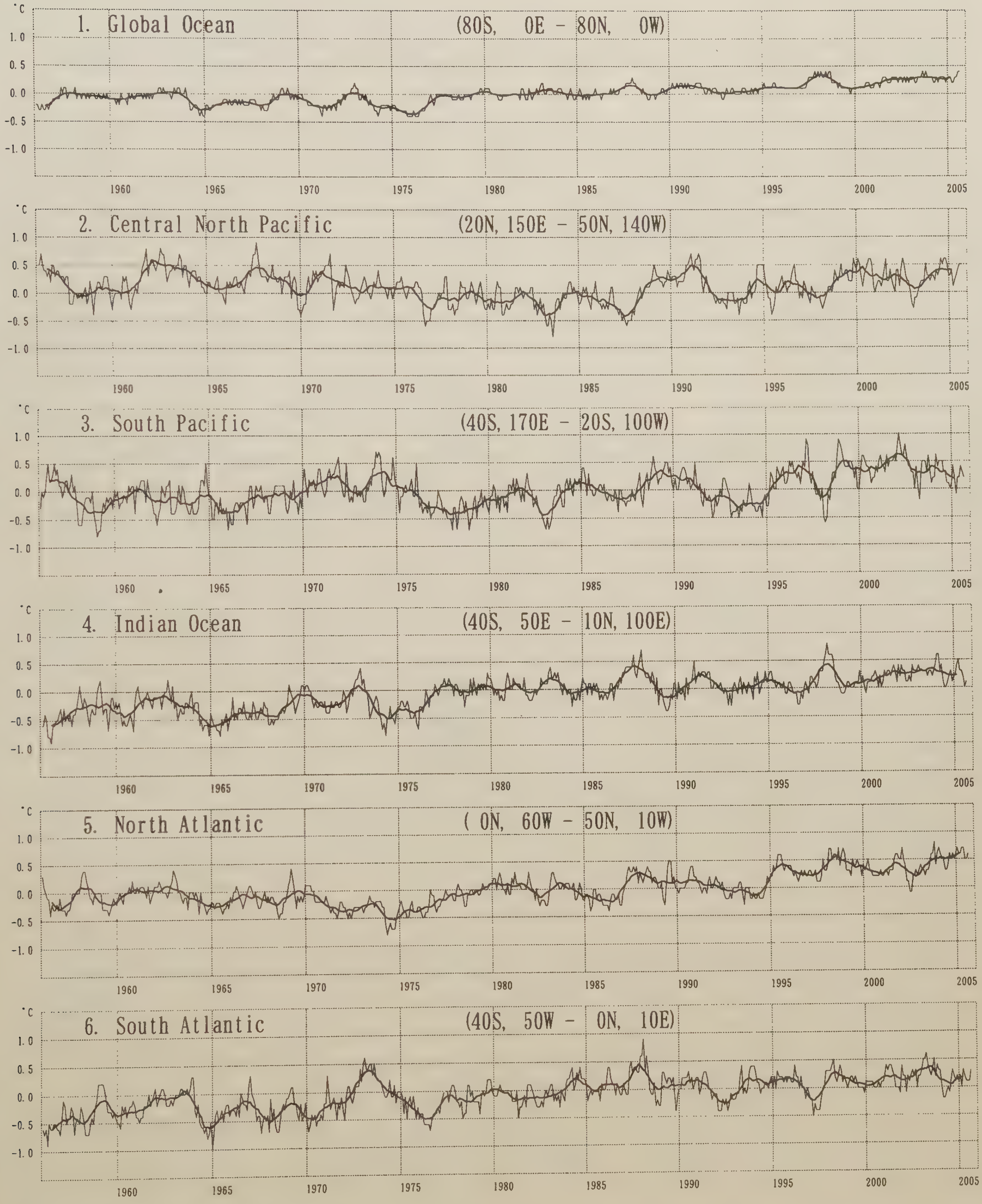
第 23 図　太平洋月平均海面水位偏差図 （2005 年 7 月）

Fig. 23　Monthly sea level anomalies for July 2005 obtained from mean sea level (1993-2001) adjusted for atmospheric pressure. This figure is prepared by the SOC of ISLP-PAC, Department of Oceanography, University of Hawaii.



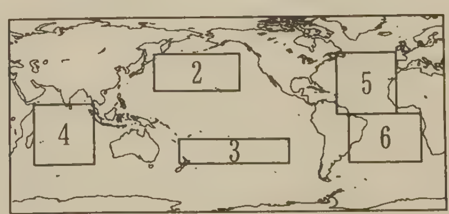
第 24 図　全球月平均海面高度偏差図 （2005 年 7 月）

Fig. 24　Monthly sea surface height anomalies in the global ocean derived from the altimeter data of Jason-1 for July 2005. Contour interval is 5 cm. Positive anomalies exceeding +5 cm are dark-shaded and negative anomalies exceeding -5 cm are light-shaded. Anomalies are computed from 1993-1998 base period means.

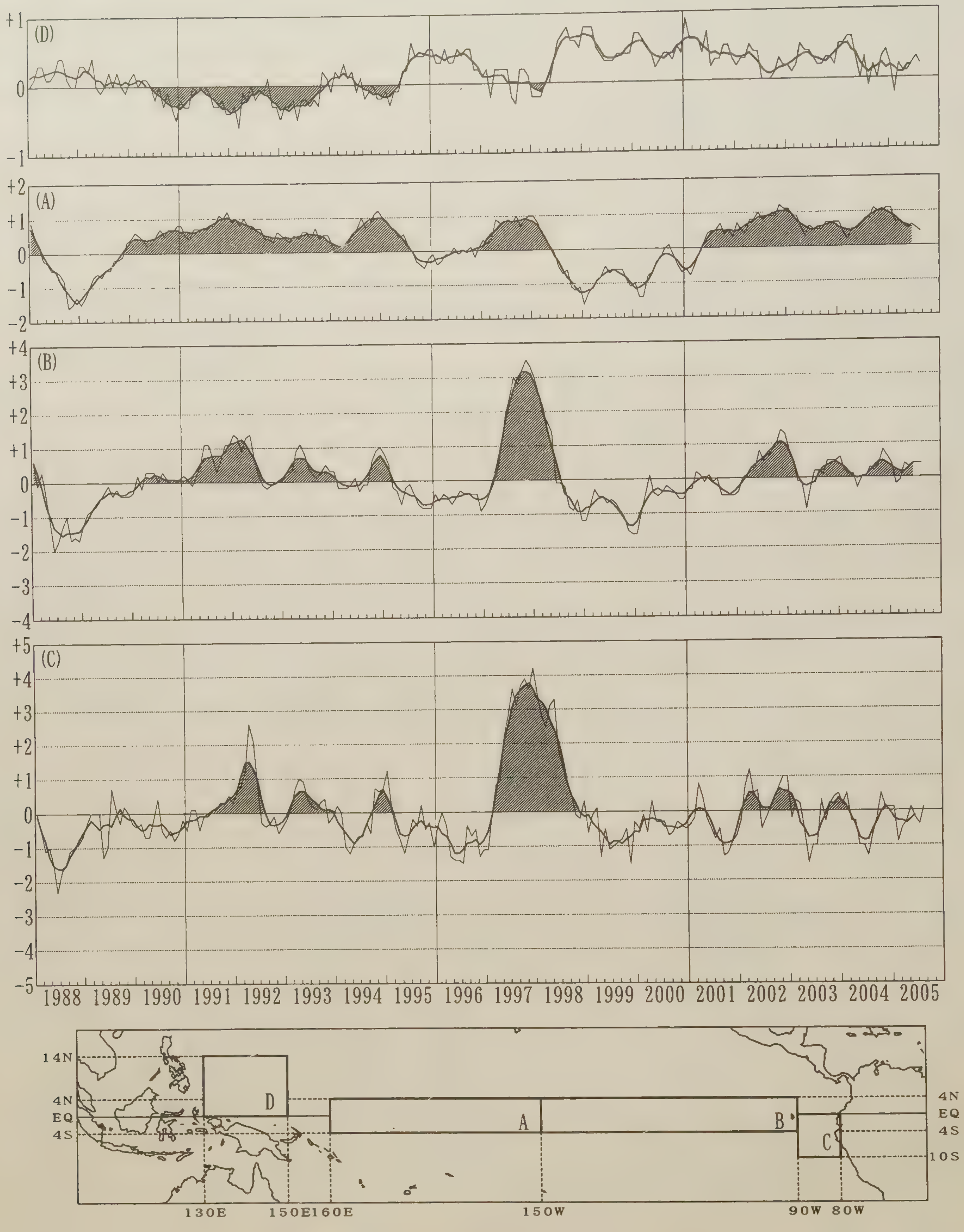


第25図 海域平均海面水温偏差の長期変動

Fig. 25 Long-term variations of monthly mean SST anomalies (°C) averaged for the sub-areas shown in the right panel. Anomalies are computed from the JMA climatology (1971-2000). Thin lines show the monthly mean and thick lines their 13-month running means.



Time Series of Tropical Pacific SST Anomalies



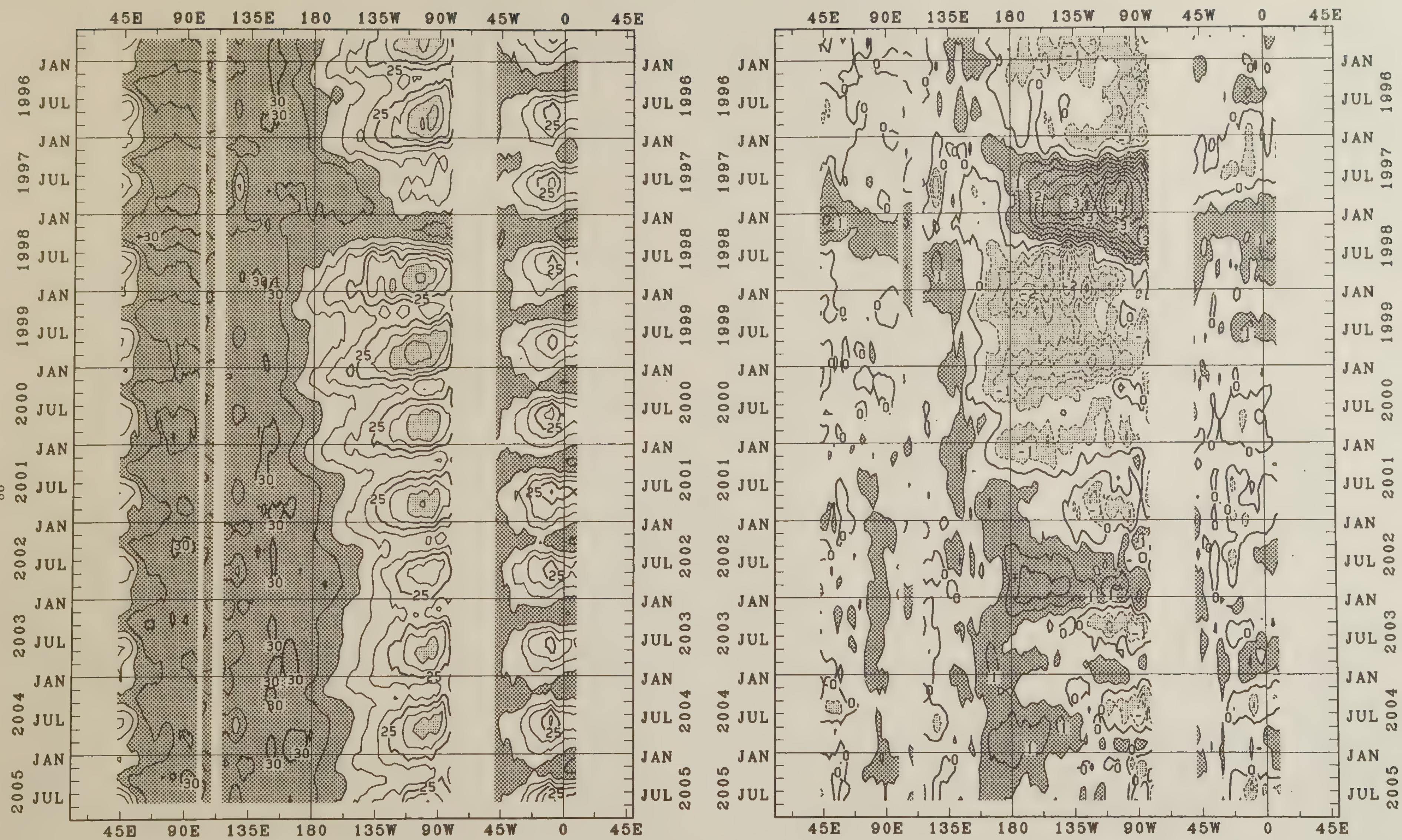
第26図　太平洋熱帯域の海面水温偏差時系列図

Fig. 26 Time series of monthly mean SST anomalies (°C) in the tropical Pacific Ocean for the areas indicated at the bottom panel. Thin lines show the monthly means and thick lines their 5-month running means. Positive anomalies (A, B, C) and negative anomalies (D) are shaded. Anomalies are computed from the JMA climatology (1971-2000).

MONTH YEAR	SEA SURFACE TEMPERATURE AND ANOMALY (°C)								SOI	SEA LEVEL PRESSURE ANOMALY (hPa)	
	REGION D 14N-EQ 130E-150E		REGION A 4N-4S 160E-150W		REGION B 4N-4S 150W-90W		REGION C EQ-10S 90W-80W		SOI	TAHITI 17-33S 149-37W	DARWIN 12-24S 130-52E
JAN 03	28.7	0.2	29.1	1.1	26.2	0.8	24.3	-0.2	-0.1	-0.1	0.2
FEB 03	28.4	0.1	28.9	0.9	26.8	0.5	26.3	0.3	-0.5	-1.5	-0.2
MAR 03	28.7	0.2	29.0	0.9	27.0	-0.1	26.5	0.2	-0.3	-0.2	0.5
APR 03	29.3	0.5	28.8	0.6	27.1	-0.1	24.9	-0.5	-0.1	0.5	0.8
MAY 03	29.7	0.4	28.9	0.3	26.0	-0.9	22.8	-1.5	-0.6	-0.7	0.2
JUN 03	29.8	0.4	29.1	0.6	25.9	-0.3	21.9	-1.0	-0.9	-0.9	0.4
JUL 03	29.6	0.3	29.0	0.5	25.6	0.2	20.9	-1.0	0.2	0.7	0.3
AUG 03	29.4	0.2	28.9	0.5	24.9	0.2	21.2	0.3	0.0	-0.2	-0.1
SEP 03	29.5	0.2	28.9	0.5	24.8	0.1	20.2	-0.3	-0.1	-0.3	0.0
OCT 03	29.7	0.3	29.1	0.7	25.2	0.5	21.1	0.2	-0.1	-0.5	-0.4
NOV 03	29.6	0.3	29.1	0.7	25.2	0.5	22.2	0.4	-0.2	0.0	0.4
DEC 03	29.2	0.2	28.9	0.7	25.5	0.5	23.4	0.5	1.1	0.9	-1.1
JAN 04	29.0	0.5	28.7	0.7	26.0	0.6	24.7	0.2	-1.0	-1.5	0.9
FEB 04	28.8	0.5	28.4	0.4	26.5	0.2	26.5	0.5	0.8	1.4	-0.6
MAR 04	29.1	0.6	28.3	0.2	27.2	0.1	26.0	-0.3	0.1	-0.7	-1.3
APR 04	29.4	0.6	28.7	0.5	27.3	0.1	25.1	-0.3	-1.4	-1.0	1.3
MAY 04	29.6	0.3	29.1	0.5	26.6	-0.3	23.3	-1.0	1.2	0.9	-0.7
JUN 04	29.4	0.0	29.1	0.6	26.2	0.0	21.9	-1.0	-1.1	0.1	1.7
JUL 04	29.6	0.3	29.3	0.8	25.4	0.0	20.6	-1.3	-0.6	-0.2	0.9
AUG 04	29.1	-0.1	29.2	0.8	25.0	0.3	20.2	-0.7	-0.5	-0.5	0.3
SEP 04	29.5	0.2	29.5	1.1	24.9	0.2	20.3	-0.2	-0.2	0.4	0.9
OCT 04	29.4	0.0	29.4	1.0	25.1	0.4	21.4	0.5	-0.2	0.0	0.3
NOV 04	29.6	0.3	29.4	1.0	25.5	0.8	21.9	0.1	-0.7	-0.8	0.5
DEC 04	29.4	0.4	29.3	1.1	25.6	0.6	23.0	0.1	-0.7	-1.4	-0.1
JAN 05	28.7	0.2	29.1	1.1	25.8	0.4	24.6	0.1	0.3	0.3	-0.3
FEB 05	28.1	-0.2	28.7	0.7	26.1	-0.2	25.1	-0.9	-2.2	-3.8	1.9
MAR 05	28.7	0.2	28.8	0.7	27.0	-0.1	25.8	-0.5	0.2	0.8	0.5
APR 05	28.9	0.1	28.8	0.6	27.6	0.4	25.1	-0.3	-0.5	0.2	1.3
MAY 05	29.4	0.1	29.1	0.5	27.2	0.3	24.4	0.1	-1.2	-0.8	0.9
JUN 05	29.6	0.2	29.1	0.6	26.6	0.4	22.7	-0.2	0.4	0.0	-0.6
JUL 05	29.6	0.3	29.0	0.5	25.8	0.4	21.5	-0.4	0.1	0.3	0.2
AUG 05	29.4	0.2	28.8	0.4	25.1	0.4	21.0	0.1	-0.6	-0.5	0.4

第1表　太平洋熱帯域の大気及び海洋の監視指数

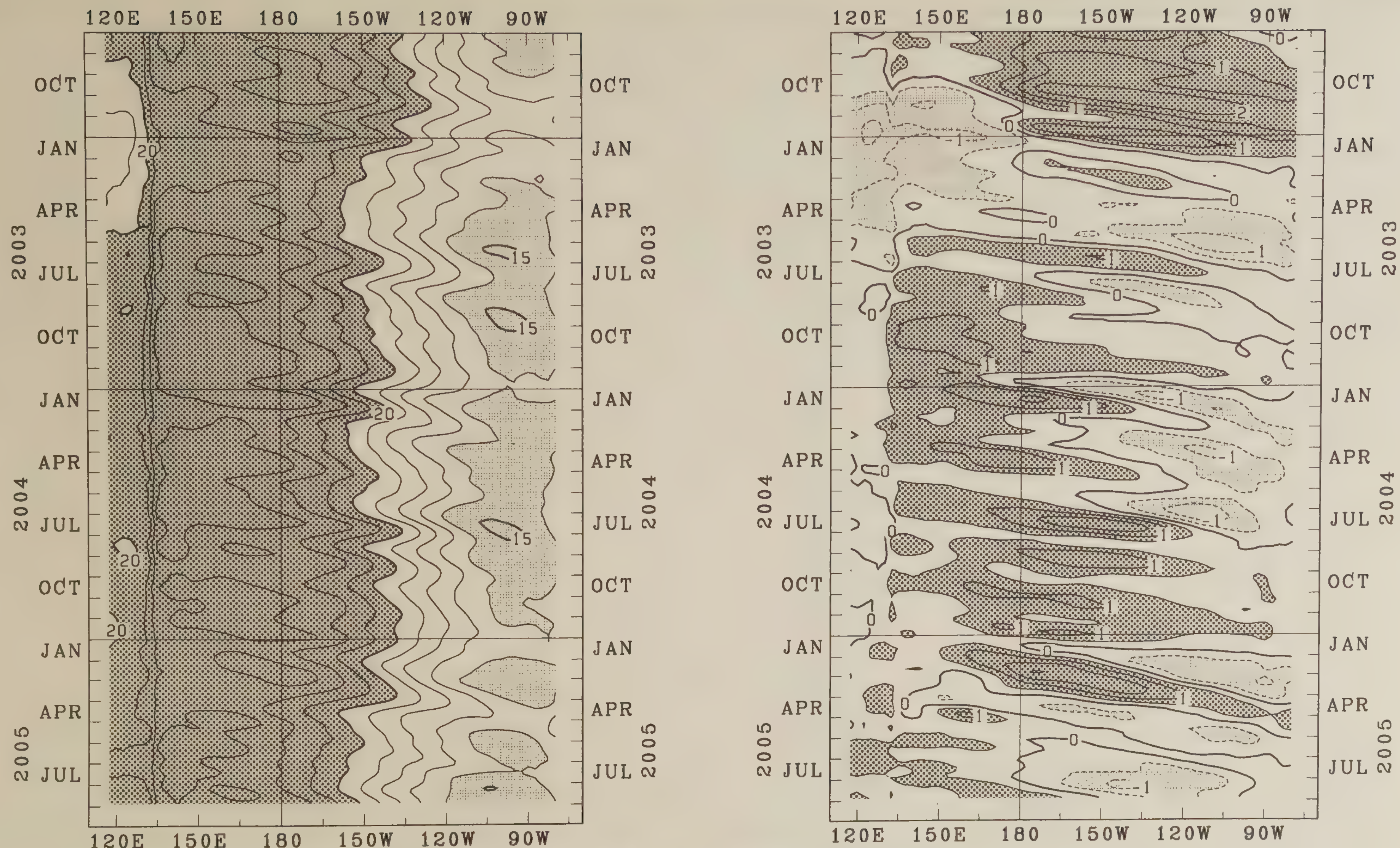
Table 1　Atmospheric and oceanic monitoring indices in the tropical Pacific Ocean



第 27 図　赤道に沿った海面水温（左）および偏差（右）の時間-経度断面図

Fig. 27　Time-longitude sections of SSTs (left) and anomalies (right) along the equator (2 ˚N-2 ˚S) in the global ocean. Contour intervals are 1 ˚C (left) and 0.5 ˚C (right). Values greater than 28 ˚C (+0.5 ˚C) are dark-shaded and values less than 23 ˚C (-0.5 ˚C) are light-shaded in the left (right) panel. Dashed contours indicate negative anomalies in the right panel. Anomalies are computed from 1971-2000 base period means.

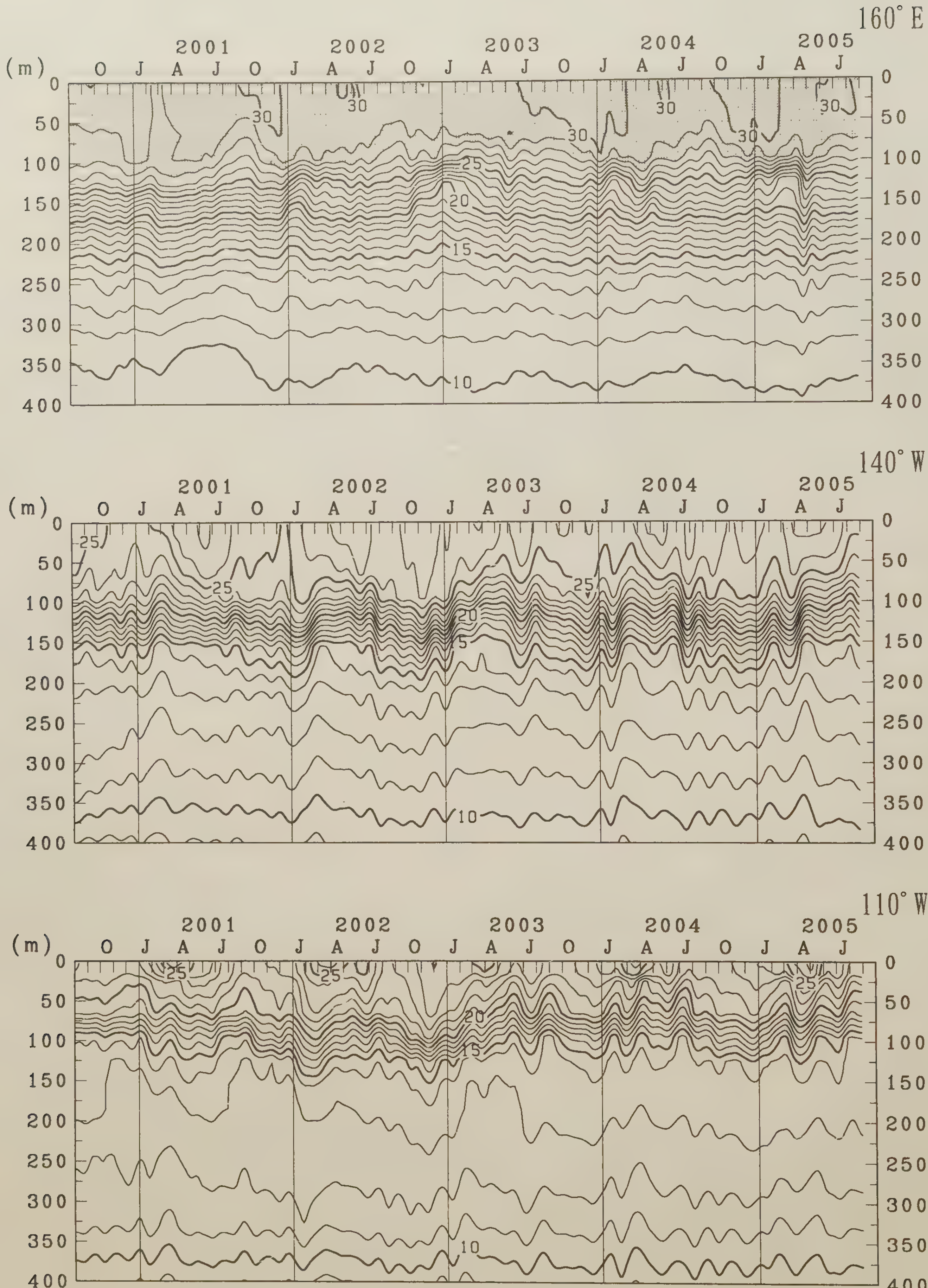
Time-Longitude Sections of Ocean Heat Content & Anomalies (Eq.)



第28図　太平洋の赤道に沿う海洋表層の貯熱量（左）及び偏差（右）の時間－経度断面図

Fig. 28 Time-longitude sections of ocean heat content in the upper 260 m along the equator (left) and anomalies (right) in the Pacific Ocean. Data are derived from the Ocean Data Assimilation System of JMA. Contour intervals are 1°C (left) and 0.5°C (right). Values greater than 20°C (+0.5°C) are dark-shaded and values less than 16°C (-0.5°C) are light-shaded in the left (right) panel. Dashed contours indicate negative anomalies in the right panel. Anomalies are computed from 1987-2004 base period means.

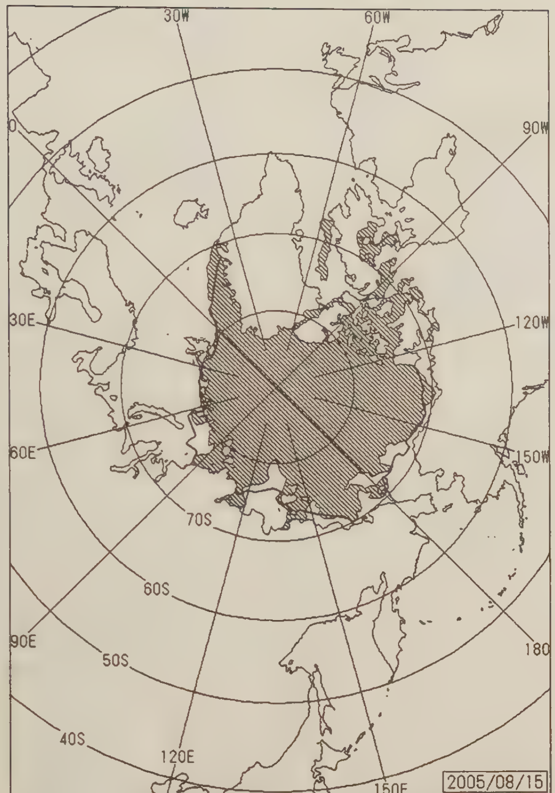
Time-depth Sections of Equatorial Subsurface Temperature



第29図　太平洋赤道域の表層水温の時間－深度断面図

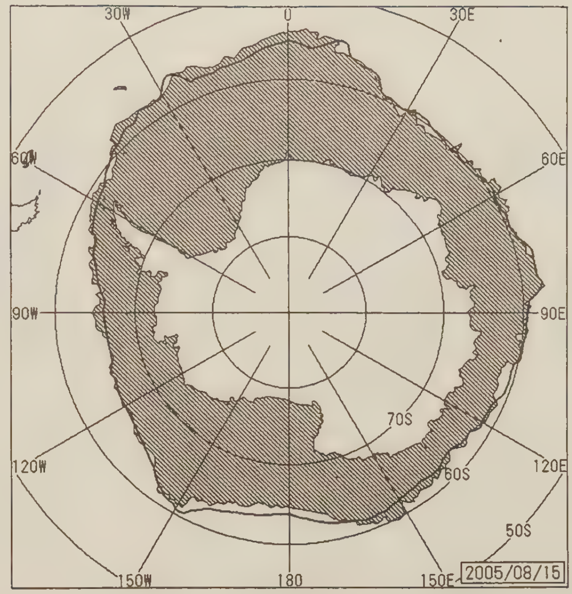
(上：西部、中：中部、下：東部)

Fig. 29 Time-depth sections of equatorial subsurface temperature for the western Pacific (top, 160°E), the central Pacific (middle, 140°W) and the eastern Pacific (bottom, 110°W). Data are derived from the Ocean Data Assimilation System of JMA. Contour interval is 1°C. Values greater than 28°C are shaded.



第 30-1 図　北極域の海氷図（2005 年 8 月 15 日）

Fig.30-1 Sea ice chart for the Arctic on 15 Aug. 2005.
The shaded area represents the sea ice extent. The bold line denotes the mean ice edge averaged for the period from 1979 through 2000.
The data source is the National Ice Center (USA).



第 30-2 図　南極域の海氷図（2005 年 8 月 15 日）

Fig.30-2 Sea ice chart for the Arctic on 15 Aug. 2005.
The shaded area represents the sea ice extent. The bold line denotes the mean ice edge averaged for the period from 1979 through 2000.
The data source is the National Ice Center (USA).

第 30-1 表　流氷に関する初終日（2004 年 12 月～2005 年 5 月）

Table 30-1 First and Last dates of drift ice at the coastal stations
(From December 2004 to May 2005)

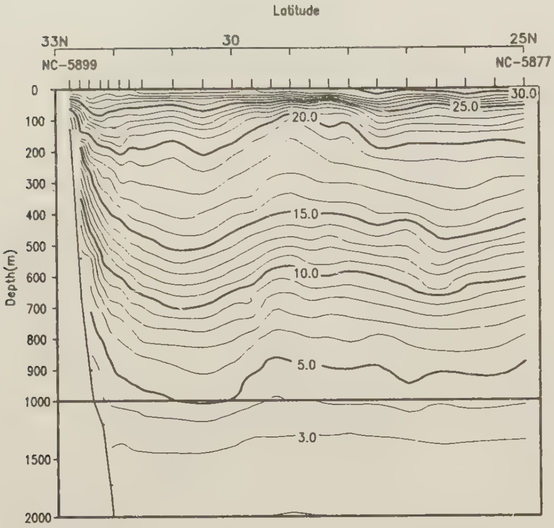
地点 Station	流氷 Drift ice			流氷接岸初日 First date of drift ice on shore	海明け First date of shore lead appearance
	初日 First date	終日 Last date	期間 Period		
稚　内 WAKKANAI	——	——	0(-30)	——	＊
紋　別 MOMBETSU	1. 23(+ 1)	3. 19(-17)	56(-18)	2. 5(　0)	3. 5(-11)
網　走 ABASHIRI	1. 26(+ 6)	3. 26(-21)	60(-27)	2. 7(+ 6)	3. 17(- 7)
根　室 NEMURO	2. 14(+ 1)	3. 19(-14)	34(-15)	2. 25(+ 7)	＊
釧　路 KUSHIRO	——	——	0(-18)	——	＊

( ) : deviation from normal for the period from 1971 to 2000
＋ : later or more than normal　－ : earlier or less than normal
＊ : no observations　—— : no phenomenon

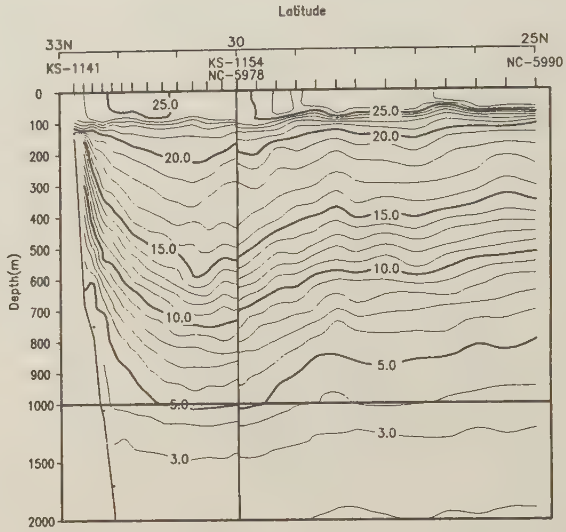


第 30-3 図　沿岸海氷観測地点地図

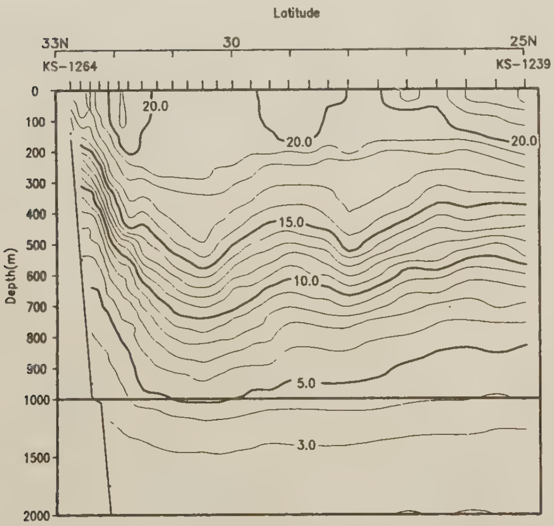
Fig.30-3 Map of the coastal stations



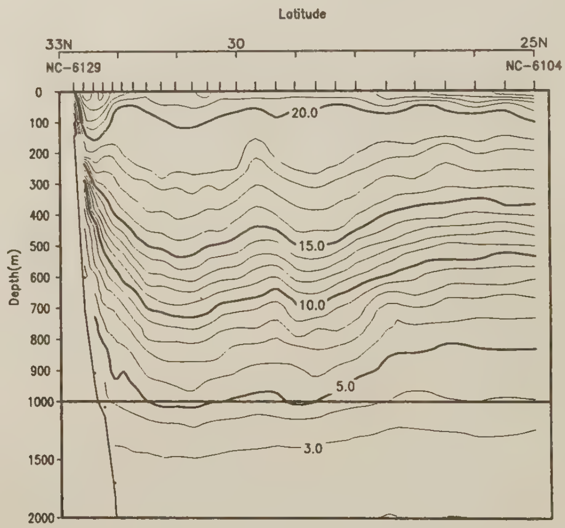
(a) July 2004 (Chofu Maru)



(b) November 2004 (Keifu Maru, Chofu Maru)



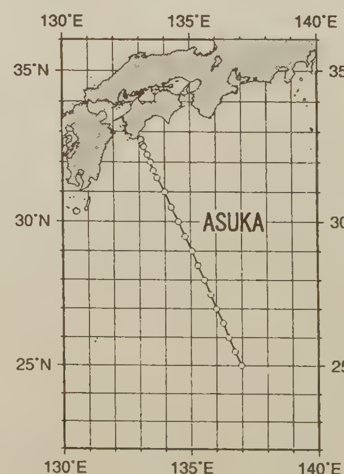
(c) February 2005 (Keifu Maru)



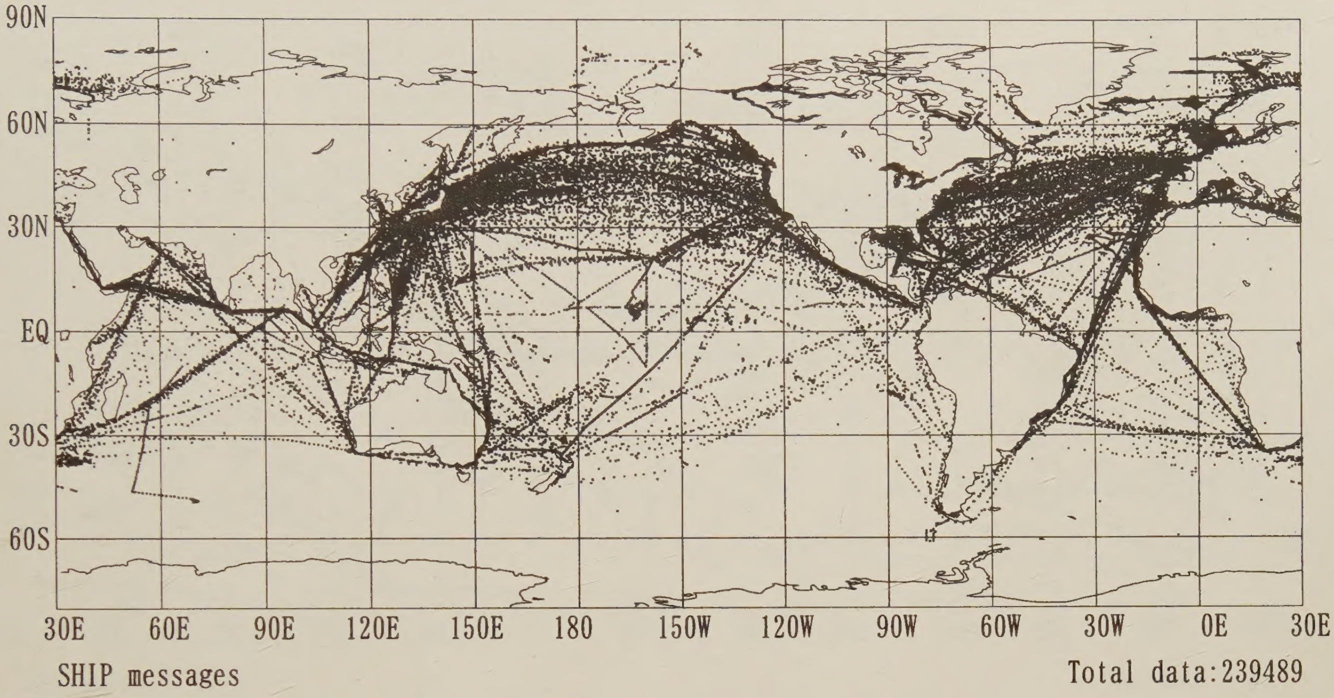
(d) May 2005 (Chofu Maru)

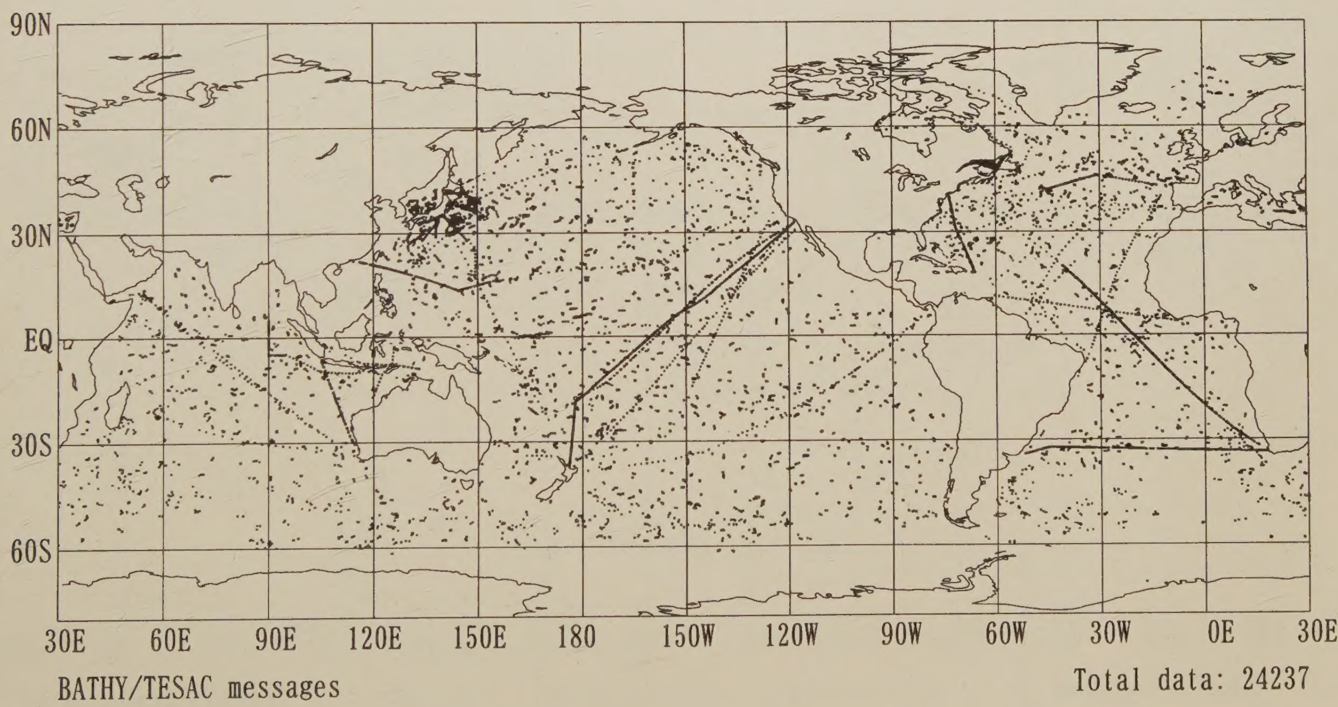
第 31 図 神戸海洋気象台啓風丸及び長崎海洋気象台長風丸による ASUKA 線に沿った水温鉛直断面図 (℃). (a) 2004 年 7 月 (長風丸), (b) 2004 年 11 月 (啓風丸, 長風丸), (c) 2005 年 2 月 (啓風丸), (d) 2005 年 5 月 (長風丸), (e) 観測位置図.

Fig. 31 Vertical sections of water temperature (℃) along the ASUKA line by R/V Keifu Maru of Kobe Marine Observatory and R/V Chofu Maru of Nagasaki Marine Observatory. (a) July 2004 (Chofu Maru), (b) November 2004 (Keifu Maru, Chofu Maru), (c) February 2005 (Keifu Maru), (d) May 2005 (Chofu Maru), (e) Location of observations.



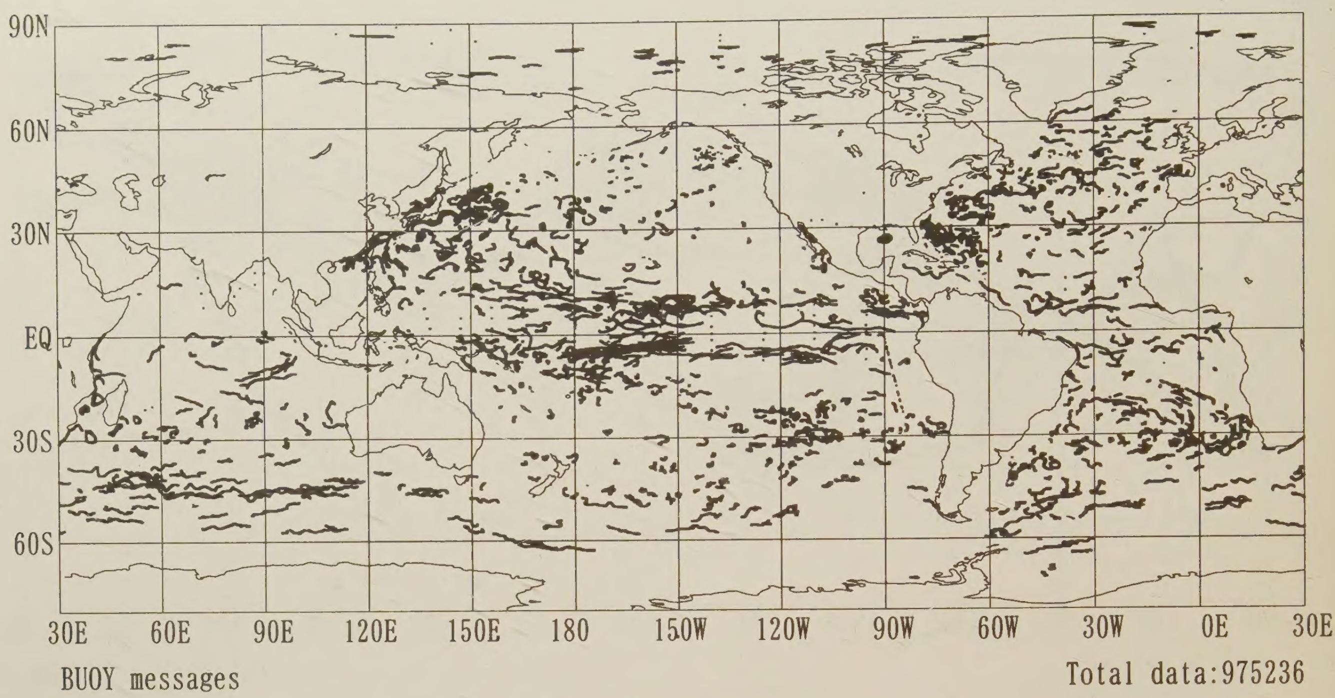
(e)

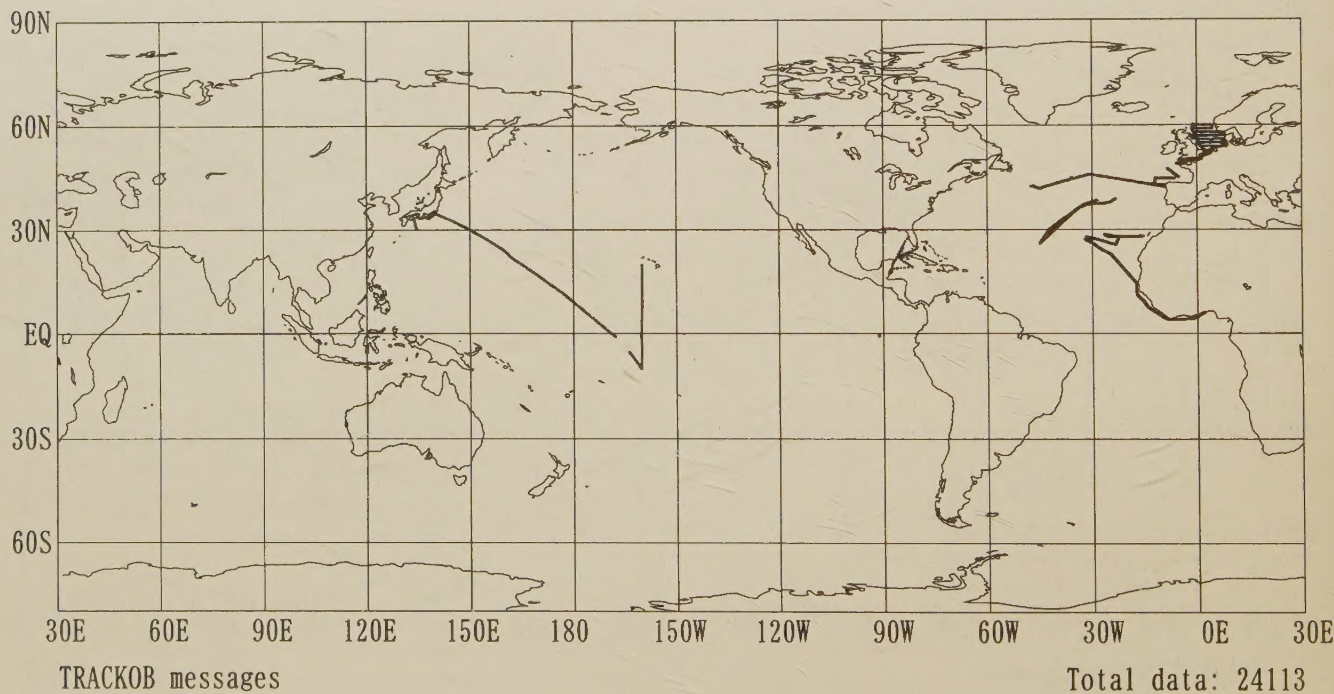




第32-1図　測点分布図(2005年 8月)

Fig. 32-1 Geographical distribution of SHIP messages (top) and BATHY/TESAC messages (bottom) for August 2005.





第32-2図　測点分布図(2005年 8月)

Fig. 32-2 Geographical distribution of BUOY messages (top) and TRACKOB messages (bottom) for August 2005.

気 象 庁 海 洋 月 報

Monthly Ocean Report

August 2005 (No. 152)

謝　　辞

本月報掲載の2005年8月のプロダクトには、気象庁が観測したデータ及びGTS（全球気象通信網）を通じて入手した国際気象通報式による通報のほか、下記の機関等から提供していただいたデータを使用しています。

防衛庁、水産庁、海上保安庁

水産総合研究センター

海洋研究開発機構、宇宙航空研究開発機構

東京大学

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